



TELEPHONE
1852
NUMBER

THE CHEMIST AND DRUGGIST

TELEGRAPHIC
ADDRESS
CHEMISTS LONDON.

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LONDON:
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E.C.

ESTABLISHED IN
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No. 502. VOL. XXXV.

NOVEMBER 30, 1889.

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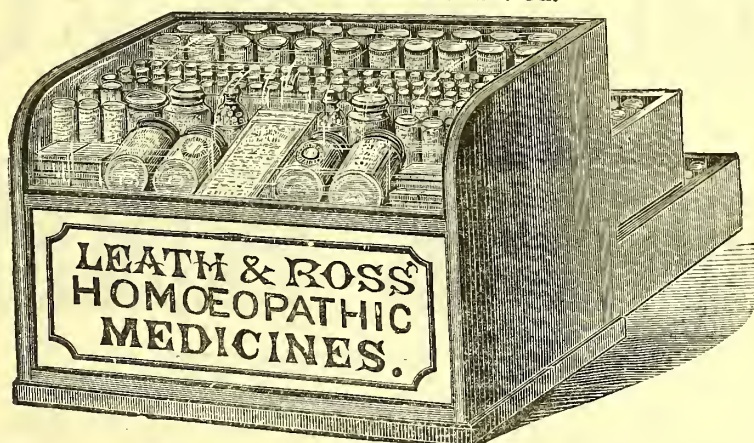
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Contents realise £17 17s. 8d.

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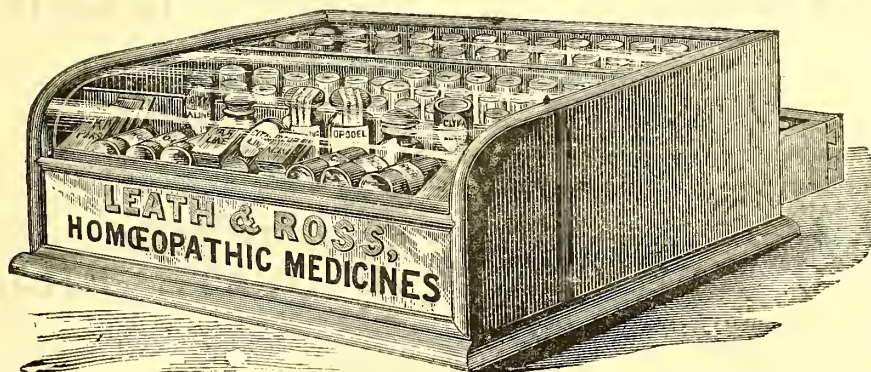
Neuraline	—	—	1/1½	Berberine	—	—	1/1½	Linimentum Auricularis	—	—	1/1½
Glykaline	—	—	1/1½	Chilblain Liniment	—	—	1/1½	Bryonia Liniment	—	—	1/1½
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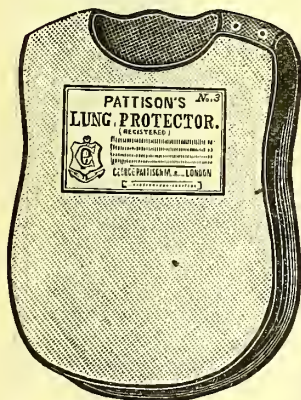
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PROTECTOR
TRADE MARK

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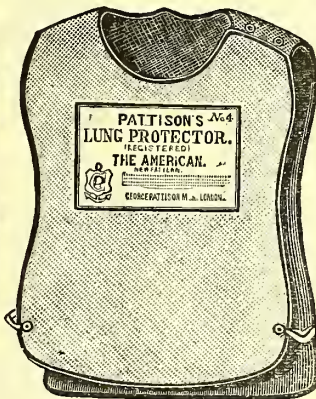
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ORIGINAL PATTERN.



Lung Protector.
THE AMERICAN.



Lung Protector.
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Chest Protector.

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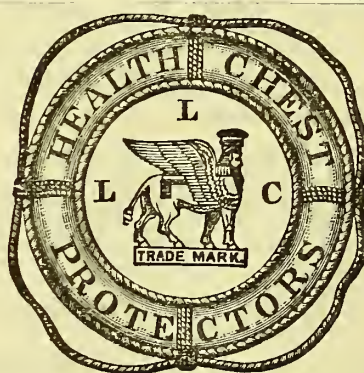
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Made from the finest Lamb's Wool, and being warm and porous permit free exhalation, and promote the healthy action of the Skin.

They may be washed without injury, thus the unpleasant feeling of wearing Felt and Chamois Protectors which are not clean is done away with.



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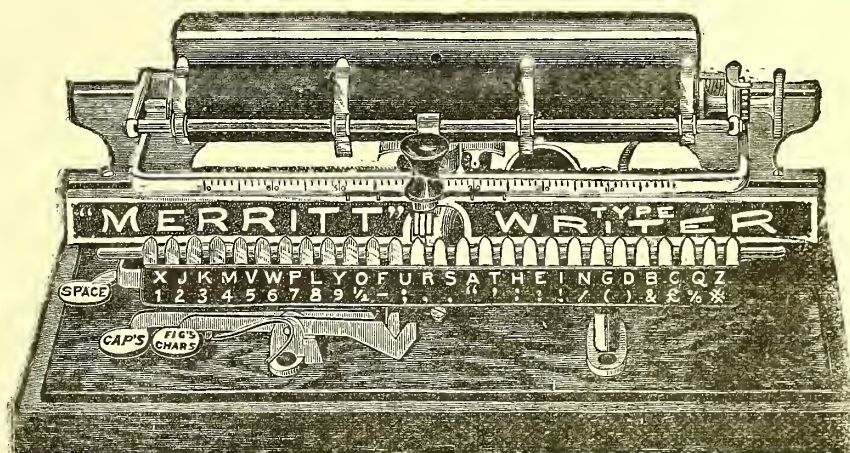
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EXCHANGE COLUMN.

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Drugs and Chemicals.

Gall. triple extract heliotrope 7s. pint. "Chemist," 7 Victoria Mount, Leeds.
30 lbs. garlic (small), 3*½*d.; 150 lbs. (large), selected, 4*d*.; or offers for lot. Mason, Broms-grove.
Poppy heads.—5s. 1,000; bag 6*d*.; sample 3*d*. Connor, Chemist, Doncaster.
Surplus stock.—16 cwt. finest quality xtl. manganese, cost 27*½*.; 1 cwt. sa-safras bark; 2 cwt. alkanet; 2 cwt. carnauba wax; 1 cwt. argols; 20 lbs. verdigris; 7 lbs. sal. acetos; 40 ferri carb; 20 lbs. cuttlefish-bone; 5 lbs. rad. spigelia; 2 cwt. rad. tarax; 60 old liq. plumbi; 40 lbs. old aq. sambuci; 1 gall. ol. sambuci; 1 cwt. cortex cascar.; 3 lbs. pot. cit.; 3 lbs. hyd. cr. creta; oil mint; 21bs. pot. acct.; 4 lbs. ol. piment.; 5 lbs. ol. rosmar; 3 lbs. ol. ergotae; 7 lbs. iodine; 1 cwt. catechu cnbes; 3 dozen light hydrometers, &c., &c.; no reasonable offer declined. Newham & Pickard, Sheffield.

Literature.

Muter's "Materia Medica," seventh edition, good condition, 7s. 16*½*d.
What offers for 95 numbers *Pharmaceutical Journal*, 1837 and 1838? Sneed, Keighley.
B. P., 1885, free 3s. 6*d*.; Buxton's "Anaesthetics," unsold, free, 2s. 6*d*. Griffin, Chemist, Chingford, Essex.
Vols. *Pharmaceutical Journal*, 1876 to 1889, *Chemist and Druggist*, 1885 to 1889, 2s. 6*d*. each. Andrew, Madeley, Salop.
Bentley's "Botany," 1837 edition, new, never used; cash offers or electrical apparatus. Cornish, Brunswick Street, Swansea.
Exchange Bentham's "British Flora," 16s., quite new, for Ganot's "Physics," 15s., new; or what offer? "Assistant," 221 Chester Road, Hulme, Manchester.
Year-books Pharmacy," 1873-8, inclusive, good condition, 2s. vol.; "Cooley," in 2 vols., condition as new, price 2*½*s.; Wills's "Pharmacy," 3rd, 1s. 6*d*.; "Materia Medica," 9th, map missing, 2s. 6*d*. C., 1 Ashfield Terrace, Harrogate.
Ganot's "Philosophy," 4s. 6*d*.; "Difficult Prescriptions," 2s. 6*d*.; Prantl's "Botany," 6s.; Bentley's, 8s.; Squire's "Companion," 13th, 6s. 6*d*.; Cooley's "Cyclopedia" (complete), 16s. Vincent, 103 Warner Road, Camberwell.

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Reliable recipes, 6*d*. each; full set of 130 neatly copied in book, 7s. 6*d*.; send for list. "Chemist," Edwards, Wye, Kent.
Six selected formulae.—ess. white rose dentifrice; aqua lavand. opt (West-End formula); tic pills (certain cure); enough balsam (keeps unchanged for years); condition powders (Price Albert's formula); these preparations have had many years' successful sale, and will "go" wherever introduced. For the six send postal order, 2s. 6*d*. or 8*d*. in stamps for one recipe, to J. Peters, 23 Park Street, Macclesfield.

Set 20 practical veterinary recipes, now in use at old-established practice, very useful to chemists about to set up in agricultural districts, 2s. 6*d*.; recipe for stomach and liver medicines to sell from window, become very popular, as public like to make up own physic, quite novel, 1s. 6*d*. the two—50 per cent. better than pushing patents; recipe for making glycerine and allied juices, splendid success, 2s. 6*d*.; method of making powder ointments with the small tin appliance, valuable scurvy skin ointment, recipe to try on, 1s. 6*d*. Johnson, 64 Furness Hill, Sheffield.

Shop Fittings.

Two gross $\frac{1}{2}$ -oz. white covered pots, new, 2s. package free. 161/37.
Nest of satinwood drawers (80), $5\frac{1}{2} \times 3\frac{1}{2}$, (4) $11 \times 3\frac{1}{2}$ in.; sample drawer sent on approval. Kendall, Blyth.
For sale.—"Bismuth" show jar, Maw's fig. 1, page 485, height 30 inches, gold top, mahogany stand, in perfect condition; offers. 175/55.
4 dozen 40 oz. W.M.; 4 dozen ditto N.M.; same quantity 20 oz.; 2 2-gallon and 2 4-gallon glass show carboys; 1 counter show case; 1 bent plate, 4 ft. 6 in. long; ointment jars and syrup bottles. Address, Mickle, Chemist, Liverpool.
Drawers, several nests; also glass cases for the counter and wall; 500 second-hand bottles, carboys, desks, outside lamps, counters, window enclosures, and entire fittings of a large shop, together or separate, at one-third the cost, at Philip Josephs, 54 Old Street, Goswell Road, London, E.C.
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Glass bottles, joh lines.—About 50 gross 3-oz. pale green pomades for corks, 4s. 6*d*. per gross; 2 gross 6-oz. screw nickel-capped pomades, 16s.; 1 gross 16-oz. ditto, 30s.; 3 gross $\frac{1}{2}$ -pint (reputed) green syrups, 7s.; 4 gross $\frac{1}{2}$ -pint ditto, 10s.; 2 gross 1-pint ditto, 15s.; 3 gross 1-pint ditto, 20s.; 3 gross 2-oz. white globe-necked panels, 7s. Hearn, 381 Kingsland Road, London.

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50 boxes very choice Princesses cigars, 7s. 6*d*. 100; cost 11s. Slater, Beeston Hill, Leeds.
25 gross excellent porous plasters, 1s. 4*d*. dozen; sample post free, 3*d*. Price, Chemist, Walthamstow.
Typograph, new, complete, 21s.; safety bicycle, "Rover" pattern, good condition, cheap, 46s. Cammack, Chemist, Fulham.
New run honey, beautiful colour; in crocks holding about thirty pounds, 6*d*. lb., crocks included. Johnson, Chemist, Godalming.
Surplus stock.—Glittering sparkling frost, under 1 lb. 1s. 6*d*. under 21bs. 3s. 4*d*. free. Foster, Navigation Street, Birmingham.
Six 6s. boxes Van Abbott's gluten bread, and six 6s. ditto biscuits, bought direct from makers on November 9; offers wanted. 159/29.

Joh line.—Cheap little Turkey sponges, soft as velvet, for bathing wounds, eyes, &c., 1s. doz., 3 doz. 2s. 6*d*. free. Brooks, Chemist, Hornsey, N.

Will exchange ten circular "Ariston" cards, diameter 13 inches, for same number; waltzes or operatic preferred. Hadley, Minster, Thanet.

Clark's syphon gas heating stove, No. 2, new last season, no use for now; cost 3*½* 15s.; my cash price 2*½* 10s. packed. Presson, Chemist, Burslem, Staffs.

12 boxes choice 1885 Havana cigars, cost 34s., price 25s.; 25/50's choice cigars, cost 11s. 6*d*. price 6s. 6*d*. per 50; good condition; also 10 boxes choice cigars in dispute, cost 15s., price 9s. 6*d*. 100. Clark, Beeston Hill, Leeds.

Neo-cyclostyle, perfect order, nearly new, prints 8 by 5, 15s., buying larger apparatus; two Welsbach burners with shades and chimneys, want new hoods, beautiful light, 12s.; exchange entertained. Griffin, Chemist, Chingford. Camera wanted.

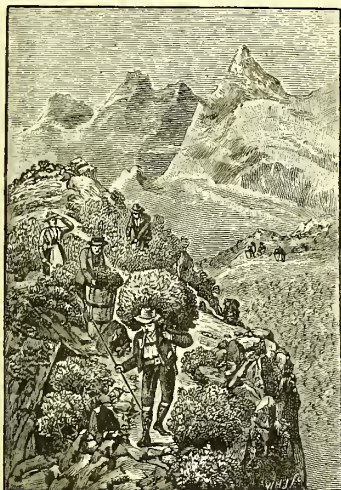
Ten dozen Greensill's Mona bouquet, 5s. dozen; about 20 lbs. aniline black, cost 4s., ex Leouhardt, Mannheim, good, but no further use, 2s. 3*d*. lb. post free, or 1s. 6*d*. lb. for lot f.o.r., sample 2*d*.; over 100 gross long viad corks, 3*d*. gross, sample 2*d*. Bowuess, Workington.

Microscopic objects of every description; entertaining slides suitable for evening exhibition, 5s. dozen, list free; 4 dozen slides sent, carefully packed and postage paid, for 21s., to Australian colonies, Belgium, Canada, France, Germany, India, New Zealand, South Africa; stereoscope slides wanted in exchange. Henry Ebbage, 344 Caledonian Road, London.

WANTED.

Quart percolator, complete. Mason, Chemist, South Fulham.
Open to buy surplus stocks of patents and drugs; send lists. 157/8.
Shop fittings and stock purchased for cash. Natali, 184 Aldersgate Street, E.C.
Wanted, a materia medica cabinet, cheap. Crook, 5 York Street, New Swindon.
Dental engine, teeth, apparatus, specimens, for cash. Pattinson, Dentist, Windermere.
2-drachm pessary moulds, Maw's pattern. State-price to T. Tomlinson, 2 Lower Seymour Street, Portman Square, W.
Empty second-hand Hunyadi or Esculap bottles, quart size. State price to J. T. Hall, 15 Commercial Road, Bourne-mouth.
A medium-sized portable vulcanizer and flasks; also a quantity of teeth, assorted. "Dentist," 172 Islington, Liverpool.
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First-class bi- or monocular microscope stand, with latest improvements for oblique illumination; no apparatus; must be cheap. "B.," 83 West Cromwell Road, London.
Gallon tincture press; two 4-gallon pear-shape carboys; several capsuled oil bottles; glass percolator; counter scales; tooth forceps; small shop jars. Hindle, Gorleston.

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PUMILINE ESSENCE

Is a specially prepared volatile essence, distilled from a particular variety of pine, growing nearest the snow level on the Alps. It possesses exceptional medicinal properties when given internally, or in the form of inhalations, in the treatment of Pulmonary and Diathetic Affections, such as Phthisis, Rheumatism, Gout, &c. It is a valuable deodorizer and disinfectant, and has a peculiarly refreshing and fragrant odour.

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For Sore Throat, Cough, Hoarseness, &c., they give immediate relief.

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Specially beneficial for use in Chronic Rheumatism, Gout, Lumbago, Sciatica, &c. It is also invaluable for Throat and Chest Affections, and may be taken internally, in doses of 2 to 5 drops.

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PUMILINE ESSENCE	1/6 and 2/6 per bottle.....	15/ and 24/ per dozen.
PUMILINE EXTRACT	1/ per bottle.....	9/ per dozen.
PUMILINE JUJUBES	1 1/2 and 2/3 per box	10/6 and 20/ per dozen.
PUMILINE OINTMENT	1 1/2 and 2/9 per pot.....	11/ and 27/ per dozen.
PUMILINE LINIMENT	1 1/2 and 2/9 per bottle	11/ and 27/ per dozen.
PUMILINE SOAP... (box of 3 cakes).....	1/6 and 9d., and 1/ per tablet.....	15/, 7/6, and 9/ per dozen.
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PRICE

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MEDICINE CHESTS FOR ALL CLIMATES, IN WOOD, LEATHER, AND JAPANNED TIN.

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MAW'S EARTHENWARE INHALERS

For Hot Water, Infusions, &c.

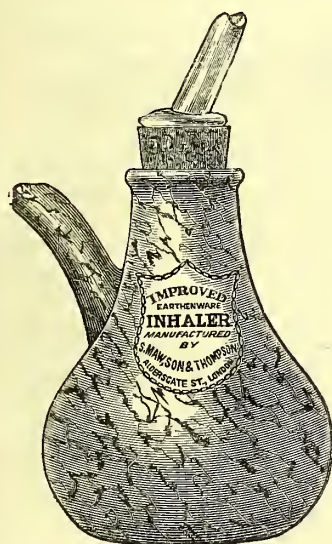


FIG. 8.

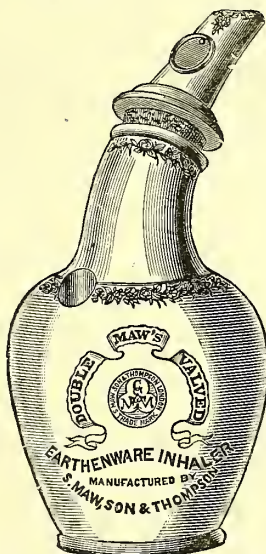


FIG. 6.



FIG. 8A.

MAW'S IMPROVED. MAW'S DOUBLE-VALVED. MAW'S IMPROVED.

Fig. 6.—Double-Valved, 60/- per dozen; with Elastic Tubes, 78/-

Fig. 8.—Marbled, 32/- per dozen.

Fig. 8a.—White, 21/- per dozen.

Fig. 8a.—White, half size, 13/- per dozen.

ELASTIC TUBES, with Mouthpieces, to fit Fig. 8 and 8a, 7 inches long, 8/- per dozen; 9 inches long, 12/- per dozen.

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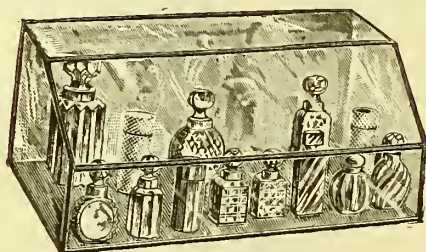
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How is it the Trade does not take more advantage of this season of the year, and endeavour to tempt some of the public away from the drapers and fancy shops? There are few things a Chemist can sell as presents, but it is surely unwise not to make a good show of **what will sell**; and certainly among the latter may be classed

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DON'T MISS THIS OPPORTUNITY, BUT BE EARLY IN THE FIELD.

JEWEL SMELLING BOTTLE.

A charming little Watch Bottle, stones in various colours (ruby, blue, green, &c.) being mounted on each side of the bottle. Attractively put up; 1 doz. in a circular glass-topped box, just the thing for Christmas. 3/6 doz. empty, 3/10 filled with sponge only, 4/- filled with sponge and ammonia, &c.

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A REALLY FIRST CLASS LINE TO SELL AT 3d.

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PRICES.

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The Chemist and Druggist

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SATURDAY, NOV. 30, 1889.

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LINCOLNSHIRE.—Light Retail; good market town; returns £450, can be doubled by personal attention; price £250.

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YORKSHIRE.—Village trade; returns £1,000, of this £260 in Wines and Spirits; valuation £400.

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LIVERPOOL.—Light Retail, Dispensing, and Prescribing; returns £270; good house and shop; price £170.

LONDON, N.W.—Light Retail, Dispensing, and Prescribing, in pleasant part; returns £400; price £250.

STOCKS.—Parties desirous of selling their stocks and fixtures in one lot for cash should apply to F. J. Brett.

MR. SYDNEY GREENWOOD,

Chemists and Druggists' Transfer Agent, Valuer to the Drug and Allied Trades,

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No.	Locality.	Returns.	Rent.	Price.
1.	LONDON, E.O.	£1,500	£120	£975.
2.	LONDON, E.O.	£750	£75	£450.
3.	LONDON, W.	£1,000	£55	£500.
4.	LONDON, N.	£500	£50	£400
5.	ESSEX COAST	£350	£31	£300.
6.	KENT COAST	£1,500	£50	£600.
7.	STAFFORDSHIRE	£1,000	£40	Valuation
8.	BERKSHIRE	£430	£45	£315.
9.	LINCOLNSHIRE	£1,000	£55	£800.
10.	HANTS	£1,000	£50	£375.

VALUATIONS

A Speciality. Write to Mr. SYDNEY GREENWOOD (as above), who will give the matter his prompt attention.

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CHEMISTS' TRANSFER AGENTS & VALUERS,
30 JEWRY STREET, ALDGATE, E.C.
Established 1870.

VENDORS will find our Offices a quick medium for the Sale of genuine Businesses. Strict confidence guaranteed. Several good-class Businesses wanted returning £700 to £1,500. Town or country.

PURCHASERS are invited to apply (stating their requirements) for particulars of businesses, sent free on application.

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MANCHESTER.—Light Retail and Dispensing Business, returning £700; commanding corner in the suburbs; net profit £300; energetic man do £1,000; large house; price £500; bargain.

SURREY.—Unopposed genuine, select Retail and Dispensing Business, returning £1,200; shop handsomely fitted by Trebble; good house; low rent, cleared by an agency; price £300.

SOMERSET.—Thoroughly reliable Light Retail, Dispensing, and Prescribing; returns £650; net profits above £300; rent £30; good house; changed hands once in forty years; price £450, simply value of stock and fixtures.

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Terms for Valuation and Sale on application.

Messrs. Berdoe & Co., 30 Jewry St., Aldgate, London, E.C.

Mr. G. B. CROCKER,

Trade Valuer, Transfer Agent, & Accountant,
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WEST OF ENGLAND.—Fashionable town; good-class Retail and Dispensing, with valuable proprietaries; returns £950; price £900.

WILTSHIRE.—An old-established Country Retail and Dispensing trade, now much neglected; returns £300; price £200.

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CORNWALL.—Good-class country trade (Mixed); returns over £2,000; price £1,000; low rent; large house.

EASTERN COUNTIES.—Unopposed Retail and Dispensing; returns £600; price £300; worth attention; good house and garden.

LONDON, W.—Good-class Retail and Dispensing; returns £800; net profit £278 after paying all expenses; price £600.

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Valuations for Probate or Transfer conducted in any part of the United Kingdom. Terms on application.

BUSINESSES FOR DISPOSAL.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

£280.—For immediate disposal, old-established Retail, in best thoroughfare large Northern city; splendid opportunity for energetic man, as there is plenty of scope for improvement. "Spero," care of Raimes, York.

FOR immediate disposal; an unopposed Business in large town; returns £350, increasing; shop well fitted up; stock very saleable; price £250 or valuation; good reasons for disposal. Apply to F. White, Auctioneer, &c., 8 Princes Street, Bishop Auckland.

SOUTHPORT, Lancashire.—To be disposed of in this popular watering-place, a capital Prescribing, Dispensing, and Druggist's Business, successfully carried on for the past 20 years; good reasons for disposing of the same. Particulars, P. Scarlett & Sons, Auctioneers and Accountants, Southport.

LONDON.—For sale, a genuine, old-established Retail and Prescribing Business, with Post Office attached; net profit £300 per annum; net rent £15; proprietor retiring from retail trade will accept any reasonable offer for immediate sale. "Chemist," 112 Sandmere Road, Brixton, S.W.

A BARGAIN.—An old-established Business, near Town, doing £500, with valuable Proprietary articles, to be sold for little more than the value of stock and fixtures; large house and shop, with private entrance, outhouses, and garden; rent very low; every information given and trial can be arranged. Apply, W. H., 13 Victoria Road, Battersea.

CHEMIST and Dentist.—For disposal, an old-established Business, in best position for extending business; an introduction given to purchaser; present proprietor retiring from business; excellent profits; ready money; town rapidly increasing; an opportunity seldom met with. Full particulars on application to Marshall, Devonshire Buildings, Runcorn.

BRIGHTON.—Chemist's Business for sale; thickly-populated neighbourhood; no opposition; cash trade; doing over £250 yearly; quite 70 per cent. profit; much more could be done by energetic man; rent £26; lease; corner shop; only reason for leaving, advertiser going into the ministry. Full particulars from Hull, 94 Southover Street, Brighton.

BUSINESSES WANTED.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

WANTED, a Light Retail and Dispensing Business; price about £800; Provinces preferred. M., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, good-class General Business, returning not less than £700; within fairly easy distance of town. To save time, state full particulars to "Cash," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WEST of England.—Light Retail Business, returning £600 to £900 per annum; answers unacknowledged in three days declined. Full particulars to "Obemist," Messrs. Hodgkinson, 198 Upper Whitecross Street, London.

WANTED, at once, a thoroughly genuine and reliable Business, returning £700 to £1,000; country preferred; must bear investigation; early possession desired; cash ready. Full particulars to J. W., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED. a good Chemist's Business, in or near London; returns from £1,000 to £1,500. Apply, with particulars, to S. G., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

A GENTLEMAN of education (old public schoolman), who has studied medicine, and has a thorough knowledge of Chemistry, Pharmacy, and Photography, and is conversant with science generally, desires to purchase a Partnership in a sound Wholesale Druggist's or Manufacturing Chemist's business. Apply, in the first instance by letter, to H. Marshall, Solicitor, 4 Farnival's Inn, E.C.

QUALIFIED Chemist with long and varied experience in Retail and Agricultural trade, quick and accurate dispenser, excellent prescriber and counterman, desires an engagement as Manager in (death vacancy preferred) thoroughly genuine business, with a view to purchase after short engagement if satisfactory; South preferred but not absolutely necessary; must be in good healthy neighbourhood; small salary accepted; good references. Apply, in first instance, "Edinburgh," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SALES BY TENDER.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

F. J. BRETT is instructed to Sell by Tender, by Mr. J. W. B. Beman, 53 Great George Street, Leeds (who is going abroad), on Thursday, December 5th, the old-established Light Retail, Dispensing, and Prescribing Business, together with the Proprietary Articles belonging thereto, in one lot as a going concern; the shop is well stocked and fitted, and in good position; in consequence of severe illness the Vendor has not been able to give it the necessary personal attention desirable, but to an energetic man there is ample scope for doing a large and profitable trade. For Tender forms and further particulars apply to F. J. Brett, Trade Valuer and Transfer Agent, 60 St. Stephen's Road, Leicester.

In the Belfast Local Bankruptcy Court.

In the Matter of JAMES HANBURY, trading as "Wheeler & Whitaker," of 37 High Street, Belfast, Chemist, a Bankrupt.

TO BE SOLD BY PRIVATE TENDER, as a going concern, all the Estate and Interest of the above Bankrupt and his Assignees in and to all that Shop and Premises, situate No. 37 High Street, Belfast, and known as "The Belfast Apothecaries' Hall," together with the Stock-in-Trade, Trade Fixtures, Name, and Goodwill of the Business carried on therein, and the right to use the Trade Marks belonging to the said Business. A Statement of Title and Conditions of Sale are lodged in the Office of the Court, and may be seen also in the Office of the undersigned Solicitors having Carriage of the Sale. Dated this 25th day of November, 1889. H. McNeill McCormick, Registrar.

Descriptive Particulars.—The above establishment, well-known as "The Belfast Apothecaries' Hall, Wheeler & Whitaker's," is one of the largest in Ireland, and situate in the best portion of the City, and has recently been rebuilt and refitted, at an expense of £1,200. The premises are held under an Indenture of Lease for a term of 20 years from the 1st day of May, 1887, subject for the first five years of said term to the yearly rent of £300, and during the remaining 15 years to the yearly rent of £325, above taxes, and to the Lessee's Covenants therein contained. Proposals for purchase by private Contract will be received by the Official Assignee up to the hour of Twelve o'clock noon, on the 16th day of December, 1889. If an offer be made which can be recommended by the Vendors, it will be submitted to the Court for approval without further notice. For further information apply to Edward Allworthy, Official Assignee, 117 Royal Avenue, Belfast: Clarke & McCartan, Solicitors for the Assignees, having Carriage of the Sale, Ulster Buildings, Waring Street, Belfast, where may be seen Statement of Title and Conditions of Sale.

TO LET.

TO LET.—Spacious premises, especially suitable for a Chemist and Druggist, in a commanding terrace of 25 shops, situate in the busiest and most rising thoroughfare in the South of London; large neighbourhood; splendid opening; the only shop unlet; good house accommodation for a substantial tenant; rent £90. Apply, Mr. Jenkin, 28 Queen's Parade, Clapham Junction, S.W.

SITUATIONS OPEN.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

JUNIOR Clerk wanted, with a knowledge of Wholesale Drug Trade. Apply to "Senega," care of Wyleys & Co., Coventry.

WANTED. December 18, for two or three weeks, a Junior Assistant; indoors. Dickinson, Chemist, Lord Street, Huddersfield.

BOTANIC Druggist and Stationery Business; active Manager wanted; one with view to purchase preferred. J. Wilson, 101 Northgate, Halifax.

ASSISTANT required; one used to an Agricultural business preferred; also a vacancy for an Improver, or an Apprentice. F. W. Parkinson, Atherstone.

IMMEDIATELY after the Christmas holidays, an active Junior Assistant. Full particulars, with photo, to Carlton & Sons, Chemists, Horncastle.

WANTED. an active Man as Manager of Botanic Medicine and Stationery; with view to purchase preferred. Apply, J. Wilson, 101 Northgate, Halifax.

IMMEDIATELY, an indoor Assistant, for Dispensing and Retail. Apply, personally if possible, to C. E. Turner, 20 Bury Street, Bloomsbury, London.

WANTED. immediately, a Junior Assistant; must have a knowledge of Dispensing. Apply, with usual particulars, to S. S. Stedman, Manor House, Weymouth.

COMPETENT Assistant; single; 25 to 30; Minor; to take charge of Branch; one accustomed to counter prescribing preferred. Apply, T. Fox, 20 Market Street, Birkenhead.

WANTED. a Junior; qualified; indoors; high-class Dispensing business, Seaside. State salary and references to R. S., care of Messrs. Evans, Sons & Co., Hanover Street, Liverpool.

ASSISTANT (indoor, sleep out); age about 22; must be steady, sober, industrious, and good counterman; Minor preferred; personal application. Apply, B., care of Hill & Son, Southwark Street, S.E.

DISPENSER to firm of Surgeons; attendance morning and evening; salary, 20s. per week; suit student. Apply, between 3 and 5 on Saturday, Mr. W. R. Dodd, Chemist, Dunsinore Road, Stamford Hill, N.

WHOLESALE Drug Trade.—Required, a Town Traveller. State district covered, returns, class of trade, salary, expenses, &c., to "Salicine," care of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED. Junior for General Mixed business; outdoors; two or three hours daily allowed for study; must have good references and be thoroughly trustworthy. Apply, stating salary required, to Melton, Chemist, Morley.

WANTED immediately, a trustworthy Assistant, able to manage branch in East-End of London; half-day per week allowed; salary £35 indoors. Apply, with photo if possible, Price & Co., 32 East Street, Barking, Essex.

JUNIOR Assistant; accustomed to medium-class Dispensing and General Retail business; abstainer. Send references, with full particulars and carte (to be returned), "Chemicus," Walker, Troke & Co., 82 City Road, London.

DEC. 28.—An Assistant, able to Extract Teeth, Prescribe, trustworthy, competent to take charge; must be obliging, quick, and active; abstainer preferred; indoors. Apply, with full particulars, and enclose photo (to be returned), Fardon & Co., Maidstone.

WANTED. an Indoor Assistant not under 24 years of age; good dispenser, able to extract teeth. Apply, stating age, salary required, when disengaged, and give references and all particulars to Dawes, Chemist, Old London Road, Walton, Hastings.

CHEMIST'S Assistant; aged 24; for a smart Retail and Dispensing business in a Yorkshire town (West Riding); must be quick and obliging. Apply, stating references and salary, required 163/28, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED. immediately, married Assistant, without family, to manage Branch; must have been accustomed to good-class business; willing and able to extend the connection; none need apply whose reference will not bear every investigation. Donbleday, Dorking, Surrey.

WANTED. an energetic young man, to take the management of a Branch business, near a railway station in the City; must be qualified, a quick and good salesman, and a good prescriber. Apply, with testimonials, to J. M. Davis & Son, 89 Bishopsgate Street Without, E.C.

DISPENSER and Photographer wanted.—Wanted, a man who understands the Dispensing of Medicines, and who has also a knowledge of Photography; salary £50 a year, with furnished apartments, board, &c. Apply to the Medical Superintendent, County Asylum, Rainhill, near Liverpool.

A MARRIED man, who would accept free rental of four rooms, kitchen, and gas, over Chemist's shop, in a leading suburban thoroughfare, for a little daily help, and care of premises; no other residents. Address, "Mutual," Office of THE CHEMIST AND DRUGGIST, Cannon Street, E.C.

WANTED. a competent part-time Assistant; a comfortable home given for about 7 hours' duty a day; convenient place for practical study; Christmas holiday allowed; 1 hour's journey from London. Send full particulars, and photo if convenient, to "Jack," care of Messrs. Bais Brothers, Jewry Street, London, E.C.

IMMEDIATELY, an obliging and industrious Junior (Turnover or Improver), for general Retail, Dispensing, and Photographic business and Branch; trustworthy and of good address; Tooth Extractor preferred. State age, height, experience, and salary required (outdoors), enclosing photo and references, to J. W., The Pharmacy, 67 Freeman Street, Grimsby. Also an outdoor Apprentice.

TOWNSHIP OF MANCHESTER.

THE Guardians of the Poor are prepared to receive Applications for the situation of Dispenser of Medicines (non-resident) at their Workhouse at Crumpsall, near Manchester. Candidates, to be eligible, must be experienced dispensers and registered under the Pharmacy Act, 1868. The person appointed will be required to devote his whole time to the duties of the office; salary £130 per annum. Applications, stating age, and whether married or single, and accompanied by copies of testimonials, to be sent to me on or before Wednesday, the 4th December next.

By order, GEO. MACDONALD, Clerk to the Guardians.

SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

EARLY employment, Wholesale or Retail; best references. 2 Albion Hotel, Blackfriars, S.E.

JUNIOR; aged 23; 6 years' experience; disengaged. W. H., 16 Blossom Street, York.

MANAGER or Senior; outdoor preferred. Particulars of "Chemist," Trinity Square, Llandudno.

AFTERNOON employment wanted by experienced man. Davis 1 St. George's Square, S.W.

ASSISTANT: first-class experience; excellent references; aged 27. C., 49 Borough, Farnham.

OUTDOORS: 16 years' experience; 5 ft. 8 in.; energetic; steady; qualified. C. F., 55 Benwell Road, N.

ADVERTISER seeks a Dispensership to Surgeon; experienced; aged 20. Poplars, Walsingham, Norfolk.

ASSISTANT: London preferred; 8½ years' first-class experience; aged 24; disengaged. A., 1 High Street, South Norwood.

TEMPORARY, during absence; long experienced; gentlemanly address; moderate terms. "Ph. Ch.," 39 Powis Square, W.

ASSISTANT or Branch Manager (qualified); can Prescribe and Extract Teeth; aged 27. "Minor," 6 Castle Street, Hastings.

JUNIOR, accustomed to first-class Dispensing and Retail (20); tall; good reference. Shakespear, 10 Southwold Road, Upper Clapton.

WHOLESALE Druggists.—Wanted, by an experienced Assistant, employment at Wet Counter. H. B., 122 Walworth Road, S.E.

PART-TIME; aged 20; height 5 ft. 9 in.; 6 years' experience; excellent references. W. Dixon, Crosslea House, Henley Rd, Ipswich.

QUALIFIED Chemist of long and varied experience seeks post as Manager, or would travel. J. G., c/o Messrs. Barron, Harveys & Co., London.

IMPROVER (Lady); disengaged; passed Prelim.; good references; 2 years' experience; salary no object. Helen Robb, Portsoy, Banffshire.

ASSISTANT or Manager; aged 30; height 5 ft. 8 in.; varied experience; Extractor (unqualified). Henry, 24 Queen Terrace, Wandsworth Bridge Road.

WHOLESALE.—As Counterman or Assistant in the warehouse; thoroughly experienced. J. R., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

LIVERPOOL.—Outdoors; understands Medicine Chests, &c.; all-round experience; good counterman; steady, obliging; aged 28. Stacey, 21 Clarence Street, Liverpool.

JUNIOR; over 3 years' experience; total abstainer; no Sunday duty; town or country; good reference; aged 22; height 5 ft. 5 in.; disengaged. Address, "Radix," 18 Northcote Avenue, Sunderland.

A YOUTH wishes for an engagement with a Chemist in the North of London, for two or three hours daily, where he can learn Dispensing. Address, stating premium required, J. H. Cuff, Station Road, New Barnet.

AS Traveller.—J. H. Borman, 1 Poplar Grove, West Kensington Park, is open for re-engagement; first-class connection amongst Mineral Water Makers and Confectioners; or would Manage a good Branch; qualified.

MANAGER, Senior, or Dispenser; qualified; married; no family; aged 31; excellent testimonials and references. Green, Isham, Wellingborough.

MANAGER or Senior, qualified, accustomed to high-class trade, having conducted some of the first houses in Ireland and England, is open to engagement in London or suburbs. "Alpha," Mr. Chas. Harvey, Giltspur Street.

MANAGER or Assistant; aged 35; disengaged; qualified; good references. Marrow, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

JUNIOR Assistant; aged 20; 4½ years with good Chemist; excellent bookkeeper; first-class references. Apply, stating salary and full particulars, Reginald, Market Drayton.

MANAGER; temporary or permanent; experienced; abstainer; integrity and ability; single; references. "Veritas," 10 Bond Street, Higher Broughton, Manchester.

MISCELLANEOUS.

Special charges are made for Advertisements under this heading, which can be obtained on application.

OFFERS wanted for 100 Lamplough's, £3 paid. 45/50, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

DENTISTRY.—First-class Mechanical work undertaken for the Profession at moderate terms; good West-end references as to ability, &c.; punctuality guaranteed. W. E. Hill, 220 High Holborn, W.C.

CHEMISTS and Druggists who are issuing Price Lists for 1890 are requested to send specimen and best rates for Advertisements to Hamilton & Co., Disinfectant Manufacturers, Wandsworth, London, S.W.

BOXES.—LIGHT WOOD BOXES for Chemists and Druggists, for Packing all kinds of articles for sending by post or rail. Cheapest, Strongest, Lightest, and Best. Samples Free, 6 stamps. Write for samples, stating sizes required, inside measure, to Casbon's Joinery and Box Works, Peterborough.

PRELIMINARY AND MINOR.

ALL Students who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tully (Hills Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. Students Herbarium, 100 specimens, 7s. 6d., post free.

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PRELIMINARY.—Arithmetic and Metric System, 1s. How to Write an Essay, 3d. Cæsar Simplified, 1s. Knotty Points in Latin Grammar, 1s. 6d. MINOR.—Equations Simplified, 1s. Illegible Autographic Prescriptions, 1s. Notes on Dispensing, 1s. Prescriptions given at the Minor, 6d. "Chemist," care of Mr. J. Edwards, Wye, Kent.

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MESSRS. BAILLY & COATES prepare Candidates for Matriculation, and the Preliminary Examinations at Apothecaries' Hall and College of Preceptors; careful preparation in Theoretical and Practical Chemistry, Physics, Botany, Materia Medica, and Practical Pharmacy for professional examinations; Laboratory fitted with every requisite. Preliminary Medical School, 30-32 Ludgate Hill, London, E.C.

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WHICH IS CHANGED BY HEAT TO A JET BLACK.

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FOR COLOURING JELLIES CUSTARDS, ETC.

Put up in 6d. and 1s. Bottles.

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TO THE
CHEMISTS & DRUGGISTS
OF
GREAT BRITAIN.

ELEGRAPHIC ADDRESS: *St. George's, Middle St.*
COLEMAN, *NORWICH,*
December, 1887.
GEORGE'S, NORWICH.

The Excise Authorities having created a difficulty as to the sale of Medicated Wine containing a certain percentage of alcohol, we obtained in January last, from the Inland Revenue Authorities, permission to sell our Liebig's Extract of Meat and Malt Wine, **WITH QUININE**, without a Wine Licence, and many Chemists not holding a Wine Licence have sold considerable quantities. In order further to meet the requirements of the trade, we have introduced a Liebig's Extract of Meat and Malt Wine, **NON-Alcoholic**, made from the juice of the Grape, Liebig's Extract of Meat, and Extract of Malt. This also can be **SOLD WITHOUT A WINE LICENCE**. Your orders will oblige either direct or through the Wholesale Houses.

Yours obediently,

COLEMAN & CO., LIMITED.

*N.B.—The Wine is sold in Bottles, 2/9 and 4/6 each.
Trade prices on application.*

P.S.—Where the Magistrate's Certificate is not held we are willing to pay the entire cost of a Retail Certificate (the holder of which can sell any kind of Wines) if an assorted order of 6 dozen is sent us of any of our preparations. List on application. Our Liebig's Extract of Meat and Malt Wine WITHOUT QUININE commands a very large sale, and is recommended by over one thousand medical men who have sent us testimonials in its favour.

SOLE MANUFACTURERS—

COLEMAN & CO., LIMITED,

ST. GEORGE'S NORWICH,

AND 3 NEW LONDON STREET, LONDON, E.C.

20

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HOUSEHOLD
SPECIALITIES.**

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Most Delicious Sauce in the World. Bottles, 6d., 1s., and 2s. each

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The Best in the World. 1d. Packets; 6d., 1s., 2s. and 5s. Tins.

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One 6d. Tin is equal to 25 eggs. In 1d. Packets; 6d., 1s. and 5s. Tins.

GOODALL'S CUSTARD POWDER.

Delicious Custards without Eggs. In Boxes, 2d., 6d., and 1s. each

GOODALL'S BLANCMANGE POWDER

Delicious Blancmange in a Few Minutes. Boxes, 6d. and 1s. each.

GOODALL'S QUININE WINE, B.P.

Best Tonic yet Introduced. Bottles, 6d., 1s. and 2s. each.

GOODALL'S GINGER-BEER POWDER.

Makes the Best Ginger-Beer. Packets, 3d. and 6d.

GOODALL'S BRUNSWICK BLACK,

or Painting Stoves, Grates, Iron, Tin, &c. 6d. and 1s. Bottles

GOODALL'S LAVENDER WATER.

A Rich and Lasting Perfume. Bottles, 1s., 2s., and 5s. each

GOODALL'S PLATE POWDER.

For Polishing and Cleaning all Metals. Boxes, 6d., 1s. and

GOODALL'S JELLY SQUARES.

Make a Delicious and Nutritious Jelly. In $\frac{1}{2}$ - and 1-pint boxes, 3d. and 6d. each.

PROPRIETORS—GOODALL, BACKHOUSE & CO., LEEDS.

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AND
DRUGGISTS' SUNDRIES.**

Monthly Price List of Patent Medicines, Druggists' Sundries, &c., will be sent post free on application to

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FINEST CONSOMMÉ.

LIQUID EXTRACT OF FINEST FRESH BEEF.

AT PARIS EXHIBITION, 1889,

MESSRS. J. MAGGI & CO. WERE DECLARED ABOVE COMPETITION,

And Mr. MAGGI was nominated

MEMBER OF THE AWARDS COMMITTEE.

GOLD MEDAL (Highest Award) INTERNATIONAL FOOD AND COOKERY EXHIBITION, LONDON

A happy thought does not alone constitute a perfect invention; simplicity is needed to make it perfect.

"MAGGI" possesses this quality in a degree that renders it as indispensable in the kitchen as salt and pepper.

"MAGGI" is simply liquid EXTRACT OF BEEF, a teaspoonful of which, added to a cup of hot or cold water, makes at once a perfect BEEF TEA, which anyone, sick or well, will relish.

Two tablespoonfuls to a quart of water (adding Vegetables, &c.) will make a better Soup or Potage than hours spent over the fire.

The improvement in the quality of Gravies, Ragoûts, Stews, Hashes, Roasts, &c., by the addition of a few drops of "MAGGI," is amazing.

Unlike all other Extracts of Meat, "MAGGI" is most delicious, does not need the addition of salt and pepper, can be used by the most inexperienced, produces as good a Consommé or perfect Clear Soup as any first-class cook can prepare by the most elaborate and expensive means, and keeps good in any climate.

Soup Stock is now rendered unnecessary, as "MAGGI" is better, cheaper, and more nutritious for the sick, convalescent, and healthy.

In 2-oz., 1-lb., & 2-lb. Bottles, of all Grocers & Druggists throughout the world.

WHOLESALE AGENTS—

E. LAZENBY & SON,

SAMUEL HANSON, SON & BARTER,

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AND

CROSSE & BLACKWELL.

VINEGAR MAKING.

Our Process makes really "PURE Malt Vinegar" under 6d. per gallon, and requires no licence.

The great success of our Malt Acid has stirred up the Vinegar Brewers into an attempt to crush it, which, however, has utterly failed.

NEWHAM & PICKARD,

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POTTER AND CLARKE, WHOLESALE AND EXPORT BOTANIC DRUGGISTS

COMPOSITION ESSENCE

OF

FULL STRENGTH

SUPERIOR FLAVOUR

AND

FINE AROMA.

Price 1/- per lb., W. Quart 11d. per lb.

SPECIAL PRICES FOR LARGE QUANTITIES.

6d. & 1/- Bottles, 3/6 & 6/- per dozen.

OFFICES AND WAREHOUSE—

5, 6, & 7 Raven Row, LONDON, E.

ALSO AT

MANCHESTER—54 Great Ancoats Street.

22

NATURAL ARSENICAL CHALYBEATE MINERAL WATERS **Levico**

SOUTH TYROL

They are prescribed in the Treatment of SKIN DISEASES
MENSTRUAL DISORDERS, CHLOROSIS, ANÆMIA,
SCROFULOUS DIATHESIS, SYPHILIS, and NERVOUS
AFFECTATIONS of all kinds.

Dose.—One tablespoonful three times a day, mixed with Wine, Seltzer, &c

Price per dozen Bottles, 12/ net.

" 100 " 86/ "

Delivered free on Rail London.

Agency—**LEVICO SPRINGS CO., LIM.**
24 COLEMAN STREET. LONDON, E.C



MARSHALL'S TWICE AWARDED
GOLD MEDALS

FAROLA

AND OTHER PREPARATIONS OF WHEAT.

These Wholesale Houses supply the Goods at List Prices.
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RANDALL'S BLACK CURRANT LOZENGES

Plain Black Currant, old square 2/6	Black Currant Voice (warm
Plain Black Currant, rough oval 2/6	astringent) 3/
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Black Currant and Tannin . . 3/	*Ipecac. & Morph., strength as "B.P."

In Bottles, 1-lb., 2-lb., 4-lb., and 7-lb. For Exportation, in Soldered Tins,
of any size. From EDWARDS, London, or SANGER & SONS; through any
Wholesale House; and from the Manufacturers,

RANDALL & SON, SOUTHAMPTON,
Who will forward Samples by post on application.

Also Brown Cough Lozenges, 2/; 7 lbs. stamped with name free, and
Musk Lozenges (Special), 2/6.

N.B.—Medical Lozenges of every kind, including those of the Pharmacopœia
of the Hospital for Diseases of the Throat, London, made with Black or
Red Currant.

ROBINSON & WORDSWORTH, MANUFACTURERS OF



Genuine Liquorice Cakes.

Our Goods
are of the
highest quality,
and are noted
for their purity
and flavour.

Registered Copyright Novelties,
AND A LARGE VARIETY OF
LIQUORICE CONFECTIONERY.

VICTORIA WORKS, PONTEFRAC.

TO AERATED WATER MANUFACTURERS

HAY'S

SOLUBLE ESSENCES

REGISTERED

ARE GUARANTEED TO BE THE FINEST IN THE MARKET.

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HAY'S SOLUBLE ESSENCE OF JAMAICA GINGER,
A Pure Essence of the Finest Ginger.
Trade Price 5/6 per lb.; 12 lbs. and upwards, 4/8.

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For First Quality Ginger Ale.
Trade Price 5/6 per lb.; 12 lbs. and upwards, 5/.

HAY'S GINGER ALE EXTRACT,
For Second Quality Ginger Ale.
Imparts Pungency, Colouring, great Brilliancy, and an unusually Fine Ginger Flavour and Aroma.
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HAY'S GINGER ALE ESSENCE,
For Third Quality Ginger Ale.
This Essence makes a beverage that is unsurpassed by the so-called finest Belfast Ginger Ale.
Trade Price 4/6 per lb.; 12 lbs. and upwards 4/8.

THESE ESSENCES
Have obtained the Highest Testimonials from all the Medical Journals, and from the Principal Trade Journals in this and other countries.



For ORANGE, VANILLA, and all other Essences,
SEND FOR PRICE LIST.

HAY'S HOP ALE ESSENCE
For the manufacture of the Finest Aerated Hop Ale. This Essence is made from the choicest Hops grown, and is unrivalled for its peculiarly fine Hop Flavour and Aroma. Hop Ale made from this Essence has the full flavour of the finest Hops, and is a really appetising Bitter Beer.
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No. 1. Highly Concentrated.
Trade Price 8/6 per lb.; 2 lbs. and upwards 8/.

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No. 2. Makes an exquisitely fine Lemonade.
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Imparts a Lemonade all the Fine Aroma and Flavour of the choicest Lemons.
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CIGARS, &c., AT THE LOWEST WHOLESALE PRICES.

La Juana 10/6 per 100, Sold at 2d. each. | El Sol Habaners, 22 6 per 100, Sold at 4d. each.
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BEWLAY & CO., LIMITED. Tobacco Manufacturers 49 Strand, and at 143 Cheapside, LONDON.
ESTABLISHED OVER 100 YEARS.



NEW PATENT

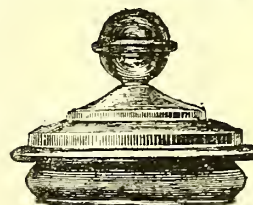
AIR-TIGHT CHEMIST JAR.

A slight turn of the knob presses the indiarubber Band against the glass, and renders the vessel absolutely air-tight. The Stopper is made of pure Nickel, of handsome shape.

INVALUABLE FOR SHOW BOTTLES, CHEMISTS, CONFECTIONERS, &c.

Samples and Prices of all Chemists' Sundriesmen.

C. MELIN,
37 CRUTCHED FRIARS, MARK LANE, E.C.



Section of the Nickel Stopper when closed.

PRIZE MEDAL,
International
Health Exhibition,
1884.

THE NEW PERMANENT

ENGRAVED WINDOW TABLETS

AWARD OF MERIT,
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Sanitary Exhibition,
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IN RUBY, BLUE, AMBER, AND OPAL GLASS.

Send particulars of size, subject matter, and colour, when price for one Tablet and upwards will be sent.

For Proprietary Articles, 100 8x6 Ruby Tablets, £3 15s. 0d.

J. R. CORSAN, THE LONDON SAND-BLAST WORKS, 80 GRAY'S INN ROAD, W.C.
TO PREVENT FRAUD, DEMAND BUSINESS CARD FROM TRAVELLERS.

HIGHEST AWARD AT THE INTERNATIONAL EXHIBITION, LONDON, 1885.
TRADE MARK Registered May 21st, 1867.

THE PIONEER TEMPERANCE BEVERAGES.—Ch. Eng. Temp. Chron.
BECKETT'S
FRUIT SYRUPS & CORDIALS

MILD DRINKS.
Cherry. Raspberry.
Strawberry. Lime Fruit
Black Currant. Lemon.
Orange. Jargonelle Pear.
Pineapple.
Raspberry Vinegar.
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"First-class beverages."—*The Grocer*.
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"Beckett's Fruit Syrups are not to be excelled."—*Anti-Adulteration*
"All Mr. Beckett's preparations are most tastefully bottled and labelled, and their bright appearance makes them ornamental to the shelves of the Confectioner and Temperance Hotel-keeper."—*Good Templar Watchword*.

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Price Lists, Testimonials, and other information sent post free on application to the Manufacturer—W. BECKETT, Heywood, Manchester.

DOULTON & CO., LAMBETH, LONDON, S.E.

MANUFACTURERS OF EVERY DESCRIPTION OF

WATER FILTERS.

NEW PATENT

Manganous Carbon FILTERS.
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MAIN SERVICE FILTERS

FOR INTERMITTENT OR CONSTANT SUPPLY.

See Reports, Analyses, &c. Detailed Lists on application.
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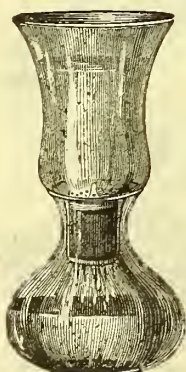
MAWSON'S FILTERS.

(IMPROVED PATENT.)

SPECIALLY SUITED TO WARM COUNTRIES.

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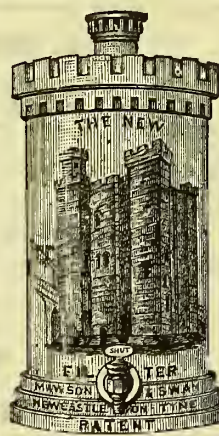
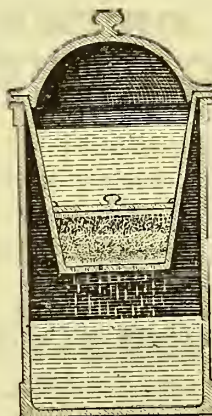
EARTHENWARE.



Plain Glass ... 4/6
Do., with handle 5/6
(including recharges)



Size— 1 2 3 4 6 gallon.
Price— 14/6 21/ 27/ 35/ 50/ each.



White, decorated 1 2 4
Earthenware.. 35/ 45/ 65/



Engraved Glass .. 6/3
Do., with handle .. 7/6
(including recharges)

THE ABOVE ARE RETAIL PRICES

SIMPLE, SAFE, EFFICIENT, EASILY & ECONOMICALLY RENEWED.

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Carriage free from the Proprietors on receipt of remittance, or may be ordered through any Chemist in the United Kingdom.

BY ROYAL LETTERS PATENT.

HASSALL & CO.'S PHOSPHO-CITRIC ACID

Is the Best, Purest, and most Economical Agent for Acidulating all Saccharine Beverages.

Price only **10d.** per lb., in 9 and 18 gallon casks ; **1s.** per lb. in small quantities.

One Ounce Measure is equal to One Ounce of Citric. It produces a higher class Beverage, and shows an economy of between £6 and £7 per cwt.

We do not ask for an order, we merely solicit the favour of a trial.

3-oz. Sample for Postage (3 stamps), or 14 lbs. on approbation.

PAMPHLET GRATIS.

UNSOLICITED TESTIMONIALS.

We are pleased to be able to testify that your Phospho-Citric Acid is satisfactory under the most severe trials. We have placed Manufactured goods in which your Acid was used in a refrigerator for months, and also for nine months in a stove in which the temperature stands at over 150° day and night, and the bottles when examined to-day were as bright as the day they were put in.

LEMON STREET, ABERDEEN.

I have pleasure in bearing testimony to the fact that first-class waters are produced, with greater body and finer fruity flavour, at half the cost of Citric; and further that your Acid is free from all traces of **LEAD**, generally found in the crystals.

I am persuaded that your Acid will ultimately command the Mineral Water Trade.

Yours faithfully, WM. THOMSON.

"And may I also be permitted to add my testimony to the excellence of your Phospho-Citric Acid; I consider it far and away preferable to Citric."

G. H. ORTON, STONE GOLDING.

FERMENTATION.

When Fermentation is present, Saccharine Beverages made with this Acid will keep sound and bright several days longer than those made with Crystal Acids.

HASSALL & CO.
YORK ROAD, KING'S CROSS, LONDON.

TELEGRAMS:—"REMPUJARON LONDON."

BRAGG'S

Undoubtedly the most natural preventative and curative agent in all cases of Indigestion, Disorders of the Liver, Fevers, Cholera, Dysentery, &c.

The trade cannot do better than keep these old-established and safe preparations under the notice of their customers.

Sold in Powder, 2/-, 4/-, and 6/- bottles; also in Biscuits, 1/-, 2/-, and 4/- tins (Children like these), and in Lozenges, 1/1½ tins (very portable and convenient).

VEGETABLE CHARCOAL.



SOLE MANUFACTURER—

J. L. BRAGG, 14 WIGMORE ST., LONDON.

PEPTONATE OF IRON

SOLE MAKERS

PEPTONE OF MEAT

DENAEVER'S

LIQUID PEPTONES

STERILIZED

Free from microbes!
Keep good for ever in all climates.
118 BISHOPSGATE STREET WITHIN, LONDON, E.C.

DENAEVER'S PEPTONATE OF IRON. A bland, non-irritating and most easily assimilable ferruginous preparation. For debilitated constitutions, children, and aged people.

DENAEVER'S PEPTONE OF MEAT. A powerful restorative for all ailments of the stomach, stimulates general nutrition. Is retained when the stomach rejects all other food. Pleasant to taste.

Of all Chemists and Wholesale Houses.

WILKINSON'S COMPRESSED ENGLISH HOPS.

They are introduced to the public to enable them to make their own HOP BITTERS, YEAST, HOME BREWING, and numerous other purposes. Full particulars given in each packet.

Samples and Prices sent on application to

A. WILKINSON & SONS, 37 CANNING PLACE, LIVERPOOL

P.S.—Chemists will naturally see the great advantage in making their own Bitters from the Pure Hop itself.

Dealers in every description of Isinglass.



ROBINSON'S LIEBIG'S BEEF WINE.

Composed of Liebig's Extract of Beef, Extract of Malt, and sound Port Wine.

REPORT ON BEEF WINES.

From the results of my Analyses of various Beef Wines I have had occasion to examine, none have equalled as regards strength, purity of ingredients, and (of no less importance) the skilful and judicious manner in which the respective ingredients have been proportioned and combined. The Liebig's Beef Wine manufactured by Mr. B. ROBINSON, of Pendleton, Manchester.

It is in every sense a reliable preparation, embodying in a pleasing and palatable form all the acknowledged medicinal and nutritive properties pertaining to Liebig's Extract of Meat, Extract of Malt, and sound Port Wine.

WILLIAM ELBORNE, F.C.S., F.L.S.,

Lecturer on Materia Medica in the Owens College, Manchester (Victoria University).
December 15, 1888.

Introduced 1855.]

ROBINSON'S CONCENTRATED WATERS.

[Introduced 1855.]

One Ounce of these Waters added to Forty Ounces of Distilled Water forms a clear Medicated Water (without filtering), similar in every respect to those prepared according to the directions of the British Pharmacopoeia, and free from all Chemical impurity. They will keep good any length of time in any climate.

Aqua Anethi, Concent., 4/ lb.	Aqua Cinnam. Ver. Concent., 4/ lb.	Aqua Foeniculi, Concent., 4/ lb.	Aqua Pimentis, Concent., 4/ lb.
Anisi " 4/ "	Ossae " 4/ "	Menth. Pip. " 4/ "	Rose " 8/6 "
Camphora " 4/ "	Flor. Aurant. " 8/6 "	Ang. " 4/ "	Rose Virgin " 10/6 "
Carul " 4/ "	Flor. Sambuci " 8/6 "	Virid. " 4/ "	

The above are put up in Bottles of 1 lb. or 1 lb. and upwards, each of which has the Inventor's Protection Label over Cork.

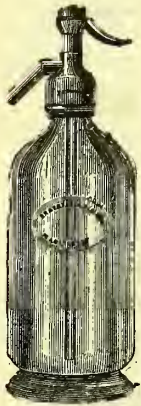
From the LANCET, July 15, 1883:—"CONCENTRATED WATERS (Robinson's, Pendleton, Manchester).—Among the samples sent to us we find Aq. Anethi, Anisi, Cinnam. Ver., Rose, and some dozen of others. Diluted with forty parts of water they form the ordinary waters of the Pharmacopoeia. They are excellent in quality, and will be very useful, especially in country practice. (1)

Wholesale Agents: HARRISON & CO., London, and most Provincial Wholesale Druggists. PREPARED BY THE INVENTOR.

B. ROBINSON, MANUFACTURING CHEMIST, DISTILLER, AND BREWER OF BRITISH WINES, MANCHESTER.



146 MINORIES LONDON E.C.
New York
Sydney
SODA WATER MACHINERY
AND ALL ACCESSORIES FOR THE TRADE
BRATBY & HINCHLIFFE, LIM.
HEAD OFFICE
SANDFORD ST., ANCOATS, MANCHESTER.
BOXES BOTTLES MACHINERY
ESSENCES
Catalogues Circulars Testimonials
Post Free



SYPHONS & SELTZOGENES

GREAT REDUCTION IN PRICE.

We have recently been entrusted with a most important Agency for the above-named goods. Our Principals are the best known firm in Paris, and the Syphons are undoubtedly the cheapest and strongest in the market. The tops are made of pure English Tin, guaranteed free from lead. The Seltzogenes are made on the well-known "Fevre" system, and each one is thoroughly tested before being sent out.

WE CAN GIVE TO LARGE AND SMALL BUYERS EXCEPTIONALLY LOW PRICES.
PLEASE WRITE US AT ONCE FOR PRICES, STATING QUANTITY OF EACH KIND REQUIRED



SODA-WATER MACHINERY.

MELBOURNE EXHIBITION, 1889, UNPRECEDENTED SUCCESS.

We have obtained at the above Exhibition

3 HIGHEST AWARDS POSSIBLE

A feat never accomplished before by any other house supplying requirements for the Aerated Water Trade.

These awards will carry with them **THREE GOLD MEDALS**, which were awarded as follows:—

- 1st—SODA-WATER MACHINERY (Highest Award possible).
- 1st—ESSENTIAL OILS & FRUIT ESSENCES (Highest Award possible).
- 1st—PATENT AND ORDINARY BOTTLES (Highest Award possible).

WRITE FOR NEW ILLUSTRATED CATALOGUE, POST FREE.

BRATBY & HINCHLIFFE, LIM.

Aerated Water Engineers and Glass Bottle Manufacturers,

SANDFORD ST., ANCOATS, MANCHESTER,

And at 146 MINORIES, LONDON. E.C.

QUARTER & HALF POUND TINS

OF

"ROYAL CHARTER" AND "UPPER CRUST"

TOBACCO

Make most Suitable Presents for Coming Season.

SOLE MANUFACTURERS—

M. & R. PEACOCK, Kingsland Road, London, N.E.

A sample $\frac{1}{4}$ -lb. tin of both the above brands per Parcel Post, on receipt of Postal Order for 3s. 4d.

T. BAGE BLYTON & CO.
MANUFACTURING PHARMACEUTICAL CHEMISTS,

AND MAKERS OF MEDICATED LOZENGES OF

The Throat Hospital
and

The British Pharmacopœias,

Jujubes and Pastilles,

Private and Proprietary

Formulæ carefully Compounded.

Cachous and Compd. Pellets.

Bronchial and Compound

Sulphur Lozenges.

Chlorodyne Lozenges.

Composition Tablets.

Medicated Candies.

Worm Tablets.

Boiled Sweets.

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Fruit Salines.

Soluble Essence of Lemon.

OUR BRONCHIAL LOZENGES CREATE A SALE ON THEIR MERITS.

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Agent in London—Mr. ARTHUR W. SHIRLEY, 30 Paternoster Square, E.C.

"MYRTLE GROVE" TOBACCO

In 1-oz., 2-oz., and 4-oz. Packets, and $\frac{1}{4}$, $\frac{1}{2}$, 1 lb. Tins only.



TADDY & CO., 45 Minories, LONDON

ESTABLISHED 150 YEARS,

SNUFF, TOBACCO, AND SEGAR MANUFACTURERS.

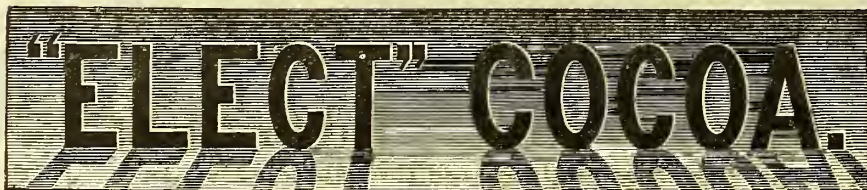


Write for List of Specialities.

ROWNTREE'S

The "MEDICAL PRESS AND CIRCULAR":—

"Certainly this preparation is of delicate flavour . . . It is perfectly soluble . . . the small quantity required for the immediate production of a cup of excellent cocoa will ensure for this 'Elect Extract' a favourable reception at the hands of persons of weak digestion, and all who prefer this wholesome beverage to tea and coffee."



The "BRITISH MEDICAL JOURNAL" says:—

"Rowntree's Cocoa Extract is one of the best. Its flavour and aroma are good. Cocoa thus prepared is one of the most digestible articles of food."

YORK, ENGLAND.

INDEX TO ADVERTISEMENTS, see Pages 31-33.

APPOINTMENT of AGENTS UNITED KINGDOM TEA COMPANY, LIMITED.

The Directors are entertaining applications for the Agency for the Sale of the Company's Teas. A liberal Commission will be allowed. The appointments will be found to be most valuable, entailing little, if any, trouble, in addition to which, from the very extensive nature of the Company's advertising in all the principal newspapers and periodicals throughout the country, the appointment will be the means of bringing large numbers of customers to the Agent, who, when buying the Teas, will at the same time purchase other articles.

About 1,200 Agents have already been appointed; it has been decided to increase this number, until in every Town and Village in the Kingdom there is an Agent of the Company.

Offices—21 MINCEING LANE, LONDON, E.C.

DUTY-PAID STORES—

IMPERIAL WAREHOUSE, LEMAN ST., LONDON DOCKS.

TYRER'S SAUCES AND "BOROUGH" KETCHUP

GOOD
VALUE

THE GIANT 1d. BOTTLE OF SAUCE.
LARGEST IN THE TRADE.

In Half-Gross Boxes, at 6/6 per Gross.*

"BOROUGH" KETCHUP, WORCESTER, HARVEY, YORKSHIRE,
OR READING SAUCE.

1d. Sample Bottles, dozen parcels	--	--	per gross 5/	extra quality 6/
1d. Giant Bottles, dozen parcels	--	--	" 5/8	" 6/
1d. Giant Bottles, dozen parcels	--	--	" 6/	" 8/
1d. Bottles (flat or round), reputed 1-pint	--	--	" 6/6*	" 8/
1d. Bottles (flat or round), reputed 1-pint	--	--	" 18/	" 24/
1-pint Imperial Round Stoppered Bottles	--	--	" 28/	" 32/
1-pint Imperial	--	--	" 30/	" 38/
12 1/2-gallon Casks (casks free) ..	--	--	" 50/	" 60/
	--	--	each 20/	" 32/

ROYAL CAFÉ SAUCE.

In 8-oz. square-stoppered bottles, 48/ per gross.
A rich, fruity Sauce of fine flavour, and worth especial attention, as being the most saleable in the market.

Samples of any kind Sent Free of all Cost by

PETER TYRER,
The "Borough" Ketchup and Sauce Maker,
70 LONG LANE, BOROUGH, LONDON, S.E.

SCOTCH AGENCY WEST NILE STREET, GLASGOW.
Also Sold by W. & C. PANTIN, Upper Thames Street, LONDON, E.C.
BURGOYNE & CO., 18 Coleman Street, London, E.C.
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The Only Gold Medal

For INFANTS' FOOD awarded at the

PARIS EXHIBITION, 1889,

HAS BEEN CONFERRED UPON

NESTLÉ'S FOOD

MILLAR'S BRITISH WINES.

ORANGE (suitable for Quinine), GINGER, RAISIN, COWSLIP, CHERRY, &c.

A. MILLAR & CO., Thomas Street, DUBLIN.

Sole Agents for London and District—H. J. ROYDANT & CO., 75 Acre Lane, Brixton, S.W.

"RAMORNIE." LIEBIC'S Extract of Meat.

As supplied to the War and India Offices.

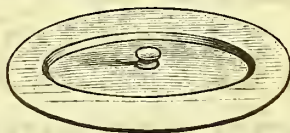
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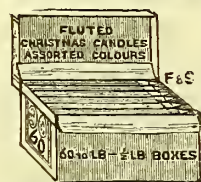
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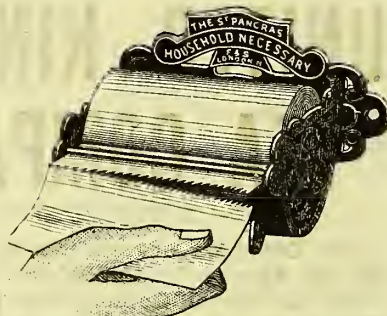
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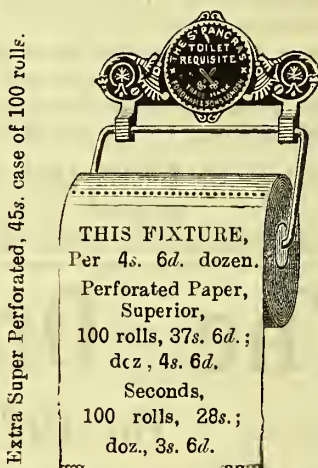
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ADVERTISEMENTS APPEARING IN THIS ISSUE OF "THE CHEMIST AND DRUGGIST."

NOTE.—The Folios shown in this Index are those at the FOOT of the Page, and not at the Top. This arrangement is necessary in order to meet the requirements of the Post Office.

Foot of Page	Foot of Page	Foot of Page	Foot of Page
Allen & Hanburys Cover	De St. Dalmas, A. E. 54	Layng, R. C. 68	Robinson & Wordsworth 22
Alofas Co. 68	Denaeyer's Peptone Co. 26	Leath & Ross 3	Rookledge, J. 67
Ambrecht, Nelson & Co. 49	Denoual, J. 48	Levermore, Aug., & Co. 68	Rosmarie Manufacturing Co. 59
Anglo-American Oil Co. (Lim.) 71	Doulton & Co. 24	Leverico Springs Co. (Lim.) 22	Rouse & Co. Text 760
Apollinaris Co. Cover	Downie, B. I. P. Co. (Lim.) 46	Liverpool Lint Co. 8	Rowland, L. 63
Assistants Wanted and Wanting Situations Text 760	Dukes, B. 10	Lofthouse & Saltmer. 42	Rowntree H. J., & Co. 23
Coloured Supplement	Duncan, Flockhart & Co. 42	London Homœopathic Hospital and Medical School 12	Sainsbury, S. 69
Attwood, A., & Co. 64	Eade's Gout Pills 48	Lineberger Wax Bleaching Works 69	Sanders, H. G., & Son 58
Australian Meat Co. 29	Elliman, Sons & Co. Text 760	Lynch & Co. Cover	Sanford & Son 63
Ayrton & Saunders 53	Employers' Liability Corporation (Lim.) 34	Macfarlan, J. F., & Co. 42	Sanitas, The Co. (Lim.) Text 760
Baela, R., & Co. 45	Eschmann Bros. & Walsh 54	Maggi 21	Schutze, F., & Co. 54
Barrett, B. H. 62	Evans, Sons & Co. 35	Marshall, J. 22	Seahury & Johnson 34
Barron, Harveys & Co. 48	Evans & Sons (Lim.) 35	Mather, W. 36	Self-Opening Tin Box Co. 64
Barber, G., & Co. 19	Evans, Lescher & Wehb 35	Martindale, W. 47	Shirley, A. W. 13
Bates & Sons (Lim.) 16	Exchange Column 14	Maw, Son & Thompson, S. 17	Silverlock, H. 12
Bates, F. W. 10	Fink, F., & Co. 68	Mawson, Swan & Weddell 24	Soden Mineral Produce Co. (Lim.) 50
Beckett, W. 24	Fletcher, Fletcher & Stevenson Text 760	May & Baker Cover	Spon, E. & F. N. 10
Beckley, E., & Sons 16	Ford, Shapland & Co. 12	May, Roberts & Co. 45	Steedman, J. 53
Berdoe & Co.	Fordham, W. B., & Sons (Lim.) 30	Melin, C. 23	Stephen Smith & Co. 66
Coloured Supplement	Fuerst Bros. 47	Mestivier & Co. 68	Stern, G. & G. 15
Bewlay & Co. 23	Godfrey & Cooke 69	Millar, A., & Co. 29	Stokes, G. R., & Co. (Lim.) 64
Beyer Frères 60	Goodall, Backhouse & Co. 20	Moller, P. 48	Sutton, F., & Co. 67
Billault, M. 46	Gonid, E., & Son 59	Morris & Callard 45	Symes & Co. 42
Blake & Mackenzie 34	Greenwood, S.	Mumford, G. S. Text 760	Taddy & Co. 28
Blondeau & Cie. 9	Coloured Supplement	Murray, Sir James, & Son 44	Toogood, W. 61
Blyton, T. Bage, & Co. 28	Hamilton & Co. 67	Nestlé, H. 29	Towle, E. T. 54
Bowdlear, W. H., & Co. 66	Hargreaves, Dr., M.D. 12	Newbery, P., & Sons 33	Townsend, J. 34
Bowers Bros. 12	Hassall & Co. 25	Newham & Pickard 21	Treatt, R. C. 58
Bragg, J. L. 26	Hay, W. 23	Noakes, B., & Co. Text 760	Treble, G., & Co. 62
Bratby & Hinchliffe 27	Haynes & Co. 58	North Medicine Co. 48	Truefitt, H. P. (Lim.) 53
Brett, F. J., Coloured Supplement	Haywood, J. H. 52	Oftinger, E. 68	Tucker, J., & Co. 43
Brooks, Peel & Co. 53	Hearn, E. A., & Co. 60	Oil of Olivet Company 48	Typke & King 49
Brooks, T. 46	Hearon, Squire & Francis 38	Oppenheimer Bros. & Co. 45	Tyrer, P. 19, 29
Brunner, Mond & Co. 41	Hewlett, C. J., & Son 47	Orridge & Co.	United Kingdom Tea Co. (Lim.) 23
Burroughs, J. 66	Hockin, Wilson & Co. 54	Coloured Supplement	Vaccine Association 53
Burroughs, Wellcome & Co. 37, 38	Holroyd, J., & Co. (Lim.) 64	Pattison, G. 5	Vigis, Lewis 55
Businesses for Disposal	Hopgood & Co. 58	Peacock, M. & R. 28	Vogt, G., & Co. 16
Coloured Supplement	Horn & Son 68	Pears, A. & F. 39	Walker, Troke & Co. 67
Cadbury Bros. Cover	Hunt, W. F., & Co. 56	Peterson, P. J., & Co. 47	Warner, H. H., & Co. 11
Carter, J. H. 60	Hyde, Nash & Co. 68	Phillips, Geo., & Co. 66	Watson & Wates 63
Central School of Chemistry 10	Ingram & Son 70	Pomies, Dr. E. 54	Wedgwood, J., & Sons 69
Chalmers, W. B. 65	Isaacs & Co. 56	Pontifex & Wood (Lim.) 62	Wedlake, M. 58
Chauteaud, G. 46	Johnson, J. H. & S. 69	Potter & Clarke 22	Wilkinson, A., & Sons 26
City School of Chemistry 10	Jones & Co. 66	Powell, A. E., & Co. 51	Wilson, A. 50
Clark, S., & Co. 62	Kay Bros. (Lim.) 10	Pure Malt Extract Co. 6	Wood, Thomas 57
Coleman & Co. 20	Keene & Ashwell 72	Quelch, H. C. 4	Wood, Vincent 52
Colthurst & Harding 34	Kent, G. B., & Sons 34	Quilliam & Co. 63	Wright, Chas., & Co. 58
Cooper & Co. 34	Kilner Bros. 63	Randall & Son 22	Wright, Layman & Umney Text 760
Corsan, J. R. 23	Knight & Co. 65	Raphael, J., & Co. 34	Wyleys & Co. 43
Crocker, G. B.	Koptica Cure 50	Redmond's Stomach Wash 68	Youldon, E. 60
Coloured Supplement		Richards, J. Morgan 13	Zimmermann, A. & M. 40
Crouch, F. B. 46		Robinson & Sons 52	
		Robinson, B. 26	

CLASSIFIED LIST OF ALL ADVERTISERS

Those Announcements appear in "THE CHEMIST AND DRUGGIST." Those whose Names do not appear above are published in one of the other issues of this month.

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[See GINGER ALE.]

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[See SYMPHONS AND ESSENCES.]
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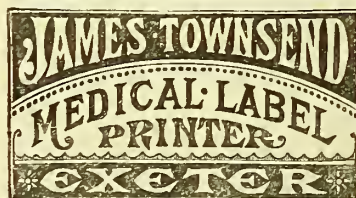
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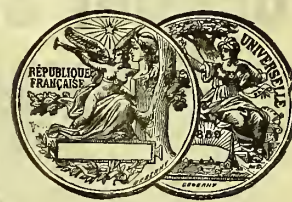
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Recent Reports.

LONDON.]

NOVEMBER 30.

[1889.]

ANTIPYRIN.

This new antipyretic and analgesic has evidently come to stay, from the fact that it has been made official in the Austrian Pharmacopœia. The literature written with reference to this drug is most voluminous, and its usefulness in numerous pathological conditions is fully corroborated by the mass of practitioners. As an antipyretic it has no equal in materia medica. In rheumatism it is said to act as an anodyne for the relief of pain, also in hemicrania, neuralgia, sciatica, asthma, and headache. Most satisfactory results have attended its employment as a hæmostatic, in uterine hæmorrhage. Bilhaut and

Hénocque consider Antipyrin of much value. A 5 per cent. solution is suggested as a convenient strength for bathing bleeding surfaces, or it may be applied on a tampon.

Bokenham obtained good results in over 100 cases of headache of different forms, especially in migraine, and encouraging effects in twenty cases of epilepsy—*The Practitioner*.

In some instances an abundant eruption of urticaria appeared, probably due to the rapid assimilation of the drug when given in solution. The Tabloids of Antipyrin are said to prevent this effect, since when taken in the solid form the assimilation is more gradual, while the physiological effect is as certain.

Antipyrin Tabloids, 5 gr., supplied to the Trade in bottles containing 25 and 100, at 18s. and 54s. per dozen.

SULPHONAL.

This new hypnotic is now proclaimed to be the most satisfactory of those in present use. Being utterly devoid of any toxic action, it produces "calm and natural sleep," without affecting the heart's action or causing gastric disturbance. Dr. Lauder Brunton, in the Croonian Lectures, 1889, spoke highly of Sulphonal as an hypnotic. "It is one of the most effective of all the recently introduced hypnotics. It does not compel sleep like morphine, but induces it in a pleasant manner, and has few disagreeable after-effects and no danger. Paraldehyde imparts an unpleasant odour to the breath for a long time after taking it. Sulphonal does not depress the heart's action like Chloral."

Professor Leach considers "the tastelessness of Sulphonal has rendered it a favourite remedy in simple insomnia, and comparative small doses, such as 10 to 15 grains (two or three Tabloids) sometimes suffice to cause the desired effect." He suggests that it is better to administer the drug in a finely powdered condition, in warm soup or milk, about two hours before retiring to bed.

A leader in the *British Medical Journal*, of Nov. 2, 1889, respecting Sulphonal, says—"It is found that the majority of observers have obtained good results from its use. Speaking generally, it produces a quiet sleep from which the patient awakes refreshed."

The insolubility of Sulphonal in cold water is its great drawback, and this being observed the Tabloids were introduced, each containing 5 grains of Sulphonal in an impalpable powder. When the Tabloids are crushed in any warm fluid they completely dissolve and may be given to the patient without exciting suspicion.

Sulphonal Tabloids (5 gr.)—the most eligible form of the drug—are supplied in bottles, containing 25 and 100, at 12s. and 36s. per dozen (subject to fluctuation of the market). Retail 1s. 6d. and 4s.

Sulphonal (Bayer) supplied to the Trade at 1s. 6d. per oz. (subject to the fluctuation of the market).

STROPHANTHUS.

The value of this as a diuretic and cardiac tonic has been fully confirmed since its introduction to the profession by us. Most unfortunately, several useless substitutes have been recently introduced into the London Drug Market, notable amongst others, the *Holarrhena Antidysenterica*; still there appears to be an adequate supply of the true *Strophanthus Hispidus* seeds. The preparations usually prescribed are the Tincture 1 in 20, and the Tabloids, each containing two minims of the Tincture.

M. Bucquoy (of Paris) employed *Strophanthus* in three cases of Angina Pectoris with astonishing effects. He is said to have given it to 40 patients, 20 of whom had mitral insufficiency. "Three times only did *Strophanthus* completely fail."

Strophanthus Tincture (B. W. & Co.) supplied to the Trade in $\frac{1}{2}$ -oz. and 1-oz. bottles, at 4s. and 6s. per doz.; 1-lb. bottles, 6s. each. Tabloids (containing two minims of Tincture in each) supplied in bottles of 50 and 100, at 8s. 6d. and 16s. per doz.

TRINITRINE TABLOIDS.

The efficient action of Trinitrine depends upon the proper administration of the drug. The B.P. Tabellæ [Lozenges] do not dissolve quickly, and the patient may suffer a long time before being relieved. This accounts for the reaction in the minds of some in favour of solutions, which are of course inconvenient and unsafe.

The *Lancet* says—"We have made trial of these new Tabloids, and find that they act admirably."

Trinitrine (Nitroglycerine) Tabloids (1/100 gr. and 1/50 gr.) supplied to the Trade in bottles of 25 and 100, at 7s. and 18s. per dozen.

Trinitrine and Amyl Nitrite, and Trinitrine Comp. Tabloids, supplied to the Trade in bottles of 25 and 100, at 12s. and 36s. per dozen.

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Above Prices subject to usual discount.

UNGUENTUM LANOLINI (LANOLINE OINTMENT BASE).

On account of its sticky nature, Lanoline was objected to by some physicians, but this objection has now been overcome by the introduction of a Lanoline Ointment base—Unguentum Lanolini, which is applicable wherever, formerly, lard or any other old ointment bases have been used. Its advantages may be summed up as follows:—

1. It never turns rancid.
2. It is grateful to the tenderest skin.
3. It is non-sticky and can be readily washed off.
4. It is aseptic; no bacteria or microbes can live in it, or pass through a thin layer when spread over a fresh wound.

Lanoline (Liebreich) supplied to the trade in 1 lb. and 7 lb. tins at 2s. 8d. per lb. Anhydrous Lanoline (Lanolinum Anhydricum), at 3s. 4d. per lb. Lanoline Ointment Base (Ung. Lanolini), 2s. 2d. per lb. Anhydrous Lanoline Base, 2s. 10d. per lb. Lanoline Cold Cream supplied in pots at 14s. per doz. Lanoline Hazeline Ointment, in pots at 14s. per doz. Lanoline Pomade, in pots at 14s. per doz. Lanoline Toilet Soap, 8s. per doz. Lanoline Eucalyptine Soap, 8s. per doz. Lanoline Pinol Soap, 8s. per doz. Toilet Lanoline, in tubes at 4s. 6d. per doz. Lano-Creolin, in tubes, at 9s. per doz.

Above Prices Subject to Usual Discount.

BURROUGHS, WELLCOME & CO, SNOW HILL BUILDINGS, LONDON, E.C.

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Published every Saturday.

Subscription 10s. per year, payable in advance; dating from the commencement of any month.

Supplied only to persons connected with the Trade.

Post free to every country in the world. Single copies 4d. each.

Cheques or Postal Orders should be payable to EDWARD HALSE, and crossed MARTIN & Co.

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The Pharmaceutical Society of New South Wales.

The Pharmaceutical Association of New Zealand.

The Pharmaceutical Society of Queensland.

The Pharmaceutical Society of South Australia.

The Hobart Chemists' Association.

The Launceston Pharmaceutical Association.

South African Pharmaceutical Association.

For Australasian subscribers the subsidiary journal, THE CHEMIST AND DRUGGIST OF AUSTRALASIA, is included.

Literary Contents.

PAGE	Editorial Notes—cont.	PAGE
A General View of Science.... 765	Free Competition in Bleaching Powder..... 761	
A Trio at Dartford..... 765	Camphor Still Rising..... 762	
Bankruptcy Reports..... 763	Alkali and Electricity..... 762	
Commentary..... 763	Decadence of Lac-dye..... 763	
Correspondence:—	French Pharmaceutical News... 756	
The Sale of Poisons by Unqualified Persons..... 773	Gazette..... 754	
Copies of Prescriptions; Misleading Testimonials..... 774	General and Provincial News... 749	
Fixing without Hypo.; Medical Practitioners and the Pharmacy Act, &c..... 775	Investigation Wanted..... 755	
Black Spirit Varnish; November Flora, &c..... 776	Legal Reports..... 751	
Legal Queries..... 776	Medical Gleanings..... 767	
Dispensing Notes..... 776	Obituary..... 764	
Miscellaneous Inquiries..... 777	Personalities..... 750	
Cures for Dandruff..... 755	Polytechnic School of Zürich. By J. and W. H. Ince..... 757	
Editorial Notes:—	Provincial Reports..... 746	
Graduates in Pharmacy..... 760	Recent Recommendations..... 759	
	The Pharmaceutical Jonah (Sketch)..... 750	
	Trade Notes..... 766	
	Trade Report..... 768	

THE CHEMISTS' AND DRUGGISTS' DIARY, 1890.

THE distribution of the new Diary to our foreign and colonial subscribers having been completed, we have now commenced to deliver copies to our home subscribers by the Globe Parcel Express, and all who are entitled to receive this Diary should have their copies not later than December 6. CARRIAGE IS PREPAID IN ALL CASES, so that if any charge is demanded for delivery we should be obliged if subscribers would pay and take a receipt for the amount, and forward the receipt to us, when we shall refund the money.

We may point out to those whose subscriptions expire with this issue, and who have not renewed, that their subscriptions do not include a copy of the 1890 Diary. It would be a great convenience to us, and a good thing for them, to remit the renewal subscription (10s.) by an early post to Mr. Edward Halse. As far as we can at present judge, there is to be a brisk demand for the Diary, extra copies of which we supply to subscribers at 2s. 6d., and to non-subscribers 3s. 6d., carriage paid.

RAILWAY RATES AND THE DRUG AND CHEMICAL TRADES.

THE Board of Trade inquiry into railway rates for other than passengers, and the classification of goods, held before Lord Balfour of Burleigh, Parliamentary secretary of the Board, and Mr. Courtenay Boyle, assistant secretary, Railway Department, has been continued during the present week at the Westminster Town Hall. There has been a large attendance of representatives of the railway companies, legal and otherwise, of chambers of commerce and agriculture, and of the great trading and industrial centres of the kingdom interested in limiting the powers of the railway companies in reference to their charges for the conveyance of goods traffic.

Mr. Findlay, the general manager of the London and North-Western Railway, has been under examination for the last seven days. At the close of his cross-examination on Wednesday, Mr. Balfour Browne, Q.C., who represents the Mansion House Committee and the general body of traders, said that since his cross-examination of Mr. Findlay was concluded he had been instructed to appear for numerous other objectors, among whom were the London Chamber of Commerce, representing, with other interests, the chemical and drug trades. He had a right on behalf of these bodies to enter into a special cross-examination of Mr. Findlay; but, having consulted with his clients, they were of opinion that as Mr. Findlay had already been examined upon the question of principle, it was not essential to examine him further as to details. At the same time he might state that, in regard to details, he had been furnished with an enormous number of facts which before the inquiry closed it would be absolutely necessary to enter into. They were of opinion that these were matters which would come best from the representatives of the different trades themselves, and under these circumstances he proposed to hold over the case of the individual traders.

Mr. Pope expressed a hope that no new objections would be sprung upon the railway companies.

Lord Balfour of Burleigh remarked that there was already an understanding that a distinction should be drawn between questions of principle and matters of detail. Details were to be reserved for a later stage of the inquiry; but he wished to know whether the objections of the traders now represented by Mr. Balfour Browne were altogether new or had already been lodged with the Board of Trade.

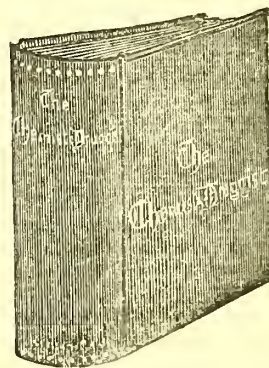
Mr. Balfour Browne said he proposed to go into no case beyond the objections which had already been lodged.

Mr. Pope, on behalf of the railway companies, expressed himself satisfied with that statement.

Lord Balfour of Burleigh approved the course Mr. Balfour Browne proposed to take, and said that the general body of traders would undoubtedly be heard with greater advantage as witnesses in connection with their own grievances than as cross-examiners.

Upon this understanding the case of the individual trading interests stood postponed.

THE reading cases which we offer to subscribers are now used by a very large number of chemists, and are found very convenient. They keep together thirteen numbers in very tidy form, always ready for reference. By having two cases in hand the numbers of a complete volume are always available until the time comes for binding. We sell these cases at the office for 1s., or by parcels post 1s. 3d., or two for 2s. 3d. We cannot forward them to any house for enclosure, nor by any of the carriers, as in the latter case we have to pay for booking.



Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor will much oblige.

ASHTON-UNDER-LYNE.

"LO! THE POOR INDIAN."—Paul John Bearfoot, a coloured man, one of "Sequah's" Canadian-Indian servants, was charged at the police court here on Monday with assaulting two men, named Harrop and Goodfellow, and a police-constable named Nightingale. The evidence for the prosecution was pretty strong. The defendant gave the following explanation and defence of his conduct:—"This was the beginning. I am to protect our business, and to keep peace outside the carriage. If anyone talks during my master's was giving his lecture I had to keep order; and if a man must not be trained to keep order as me. I was heathen, but I can keep my order in good meetings, and made me kind of grieved. Then I had to catch the man and throw him out of the crowd, and let him do what he likes after that. And I did so. I did try and keep peace. The constable came there, and I was very hot; then I could not keep myself back, and he ought to take that charge as a good man. But no; he put the handcuffs to me. I say that is bad that he gave me. I showed him of good work to his fellow-men, not my fellow-men in this country. But he showed me shame, to talk me in insulting words so. But I said, beside that, I forgive him what he has done; I will be good friends because of him. Glad of leaving this plain. That is the pay I got of my labour in Ashton." Notwithstanding this exceedingly lucid explanation of how it all happened, the magistrate fined Mr. Bearfoot 5s. and costs, with the option of seven days' imprisonment.

BRIGHTON.

IN HONOUR OF THE VETERANS.—On Thursday, Nov. 20, an interesting gathering of chemists took place at Booth's Restaurant, upon which occasion a supper was given in honour of the two oldest and most respected chemists in the town, who recently celebrated their golden weddings, viz, Mr. W. D. Savage, J.P., president of the local association, and Mr. W. Cornish. The chair was occupied by Mr. Alderman A. H. Cox, J.P., who is also an old Brighton chemist. After a good meal the Chairman submitted a toast in honour of the guests, remarking that when he came to Brighton in 1839 Mr. Savage was already in business, and Mr. Cornish followed soon after. Since then both had borne very high characters, so much so that all who had known them during the intervening years respected and honoured them. They had, moreover, performed their public and private duties with credit to themselves and to the town. (Applause.) Before the toast was drunk several gentlemen, including Messrs. Bird, Kilby Pears, and Beal, added their testimony to the way in which Messrs. Savage and Cornish were respected by their fellow-townsmen. Mr. Shepherd having recited an appropriate original poem, the toast was enthusiastically drunk. Mr. Savage then responded. He remarked that his fifty years of married life had been a happy period, and the union a very happy one. The speaker having referred to a few reminiscences with regard to his business life and contact with fellow-chemists, Mr. Cornish said a few words in response to the toast. He feelingly thanked those present for inviting him as a guest, and added that if he were asked if marriage was a failure he should emphatically say "No." (Laughter and applause.) The next toast was that of "The Chairman," and was proposed in felicitous terms by Mr. E. F. Salmon, who said that his (the speaker's) father knew Mr. Cox forty years since. At that time he was well appreciated, but never more so than at the present time. (Applause.) In reply, the Chairman said that he always had very great respect for chemists, and was himself apprenticed to one in 1826. Since then he had been actively connected with the trade. Some years ago, when he was elected an alderman he said he should like to live and die an alderman (laughter), but now he would like to live and die a chemist.

(Renewed laughter.) In conclusion, the Chairman invited the chemists of the association to take a trip with him next year on his yacht. (Applause.) Several other toasts were submitted, one of which was that of "The Honorary Secretary" (Mr. Marshall Leigh), who had had the management of the preliminaries. It was heartily drunk, and Mr. Marshall Leigh briefly replied. During the evening some capitally-rendered songs, recitations, and readings were contributed by Messrs. Beal, Jago, Shepherd, and Costerton.

BUXTON.

THE APPRENTICES DO NOT SELL LAUDANUM.—A woman died at Buxton last week from opium-poisoning. At the inquest held on November 21, Mr. W. H. Beck, chemist, said he supplied 80 minims to the woman for 1d. "The apprentice would not supply laudanum without referring to him." Mr. Arthur Wellings, assistant to Messrs. J. C. & A. Thresh, said he supplied her with 2d. of laudanum. "Did not remember whether the same woman had come to the shop for laudanum before. Deceased might have been supplied by the other assistant or the master. The apprentice was not allowed to dispense poisons."

LIVERPOOL.

VALEDICTORY.—At the December meeting of the Liverpool Chemists' Association, the president, Mr. A. H. Samuel, F.C.S., will deliver his valedictory address, and Mr. Alfred C. Abraham, F.C.S., F.I.C., &c., will read a paper.

TINCTURE HOUSE.—The new building in Wood Street, which is being erected by Messrs. Evans, Sons & Co., as a "Tincture House" having reached the third storey, has been stopped by property-owners on the opposite side of the street on the ground of its interference with "ancient lights." One claimant offers to forego his rights for the modest sum of 500l., but it has been decided to finish the building short of the dimensions originally contemplated rather than agree to excessive demands for compensation.

CHEMISTS' ASSOCIATION.—At the special meeting held on November 21, Mr. Richard Parkinson (treasurer of the Association) was appointed to receive subscriptions for the appeal fund. Eleven guineas were paid or promised on the day, and it was understood that there would be no difficulty in getting more than twice that amount in a short time if required. It is expected, of course, that other towns will take their share of the burden. At the time of the Shepperley case several members sent their subscriptions to the Trade Association at Birmingham, before the local list was started, and altogether Liverpool contributed close on 100l.

LOUGHBOROUGH.

A FOOTBALL MATCH was played on the town ground on Wednesday between the Chemists' Half-holiday F.C. and Ashby Half holiday F.C., ending in a victory for the visitors by two goals.

MANCHESTER.

SOCIETY OF CHEMICAL INDUSTRY.—At the opening meeting of the Manchester branch of this society, to be held a few days hence, Mr. Ivan Levinstein, the president, will in his presidential address discuss, amongst other matters, the patent laws—a subject to which he has devoted a great deal of attention.

CHEMICAL CLUB.—The members of this club held a very successful conversation and "Cinderella" on Tuesday night in their club rooms, at the Victoria Hotel. There was a large attendance of the members and of members of the Manchester branch of the Society of Chemical Industry. A number of philosophical and chemical experiments formed a prominent feature of the night's entertainment. Professor Harold B. Dixon, of the Owens College, showed some interesting experiments illustrative of the reaction of gases, including one showing the explosion of fire-damp in coal-mines.

DR. JAMES PRESCOTT JOULE, like many another great man before him, was comparatively unknown by the unscien-

tific portion of the people amongst whom he lived and did his great work, but now that he is dead and his achievements are being extolled in the press there is a general desire to do him honour in the customary fashion by erecting a statue of him. Monday afternoon's meeting at the Town Hall, at which the movement was put into shape, was attended by a large number of the leading citizens. Sir H. E. Roscoe, M.P., who was one of the chief speakers, referred in his remarks to what Joule did for chemistry in the way of establishing the heat equivalence of chemical action and otherwise. Pharmaceutical chemistry was represented at the meeting by Mr. George Woolley and others.

MANCHESTER PHARMACEUTICAL ASSOCIATION.—In point of attendance and otherwise the smoking concert which was held at the Grand Hotel on Tuesday night far exceeded anticipations. Of the 300 registered members of the trade in Manchester and district, about 150 put in an appearance, including representatives from Bolton, Wigan, Oldham, Stockport, Rochdale, &c. Mr. Harry Kemp made an excellent chairman. Of those who contributed to the musical entertainment, which formed a leading feature of the proceedings, special mention may be made of Messrs. Clark, Alfieri, Chapman Brothers, Gourlay, and Smith. Mr. W. Elborne, one of the hon. secretaries of the Association, took advantage of an interval between two of the songs to put in a word on behalf of the society and its claims to support. They would be glad, he said, to see many of those present at the next meeting of the society, on December 11, at which Mr. Harry Kemp had promised to read a paper on "Our Association and its Future Programme," and Mr. W. Wilkinson would open a discussion on the recent prosecution of an unqualified assistant. Mr. Wilson (Mr. Elborne's colleague in the secretaryship) improved the shining hour by securing a number of new members for the Association. It may be added that the tables in the concert room were decorated with flowers kindly provided by Mr. F. Baden Benger and Mr. Bowden, of Patricroft.

IRELAND.

A NEW dispensary, costing, 1,200*l.*, is about to be erected at Ballynoe.

THE drug bill of the Belfast Royal Hospital for the past year amounted to 1,025*l.*

THE Cromac Mineral Water Company (Limited), Belfast, has been floated with a capital of 10,000*l.*

MR. PAUL DILLON has been appointed to the extern dispensing department of St. Vincent's Hospital, Dublin.

THE governors of the Royal Hospital, Donnybrook, will in a few days appoint a resident compounder at a salary of 70*l.* per annum.

THE President and Council of the R.C.S.I. have unanimously elected Mr. G. F. Blake registrar of the college, *vice* Mr. Brennan, deceased.

THE senate of the Royal University, Dublin, notify that on December 21 next they will appoint two examiners in materia medica.

MR. THOMAS MAYNE, photographic chemist, Lord Edward Street, Dublin, has been elected on the council of the Photographic Society of Ireland.

MR. JOHN JONES, dispensary officer at Ardee, has sued for and obtained a sum of 21*l.* 9*s.* against the guardians of the union, who were his debtors for that amount.

FROM statistics issued by the authorities of Jervis Street Hospital, Dublin, it appears that during the past year 23,555 extern patients obtained medicines at that institution.

THE Limerick Board of Guardians last week passed a resolution that if both dispensers attached to the workhouse be absent simultaneously in future they shall be called on to resign.

SIR HENRY COCHRANE, manufacturing chemist, Dublin, has been appointed chairman of the citizens committee formed to present an address of welcome to the incoming Viceroy of Ireland.

THE council of the R.C.S.I. have decided on having a winter course of practical chemistry and pharmacy, in addition to the usual summer session, the change to come into operation immediately after the Christmas vacation.

AT the sixth annual meeting of the Belfast Mineral Water Company (Limited) a dividend of 10 per cent. was declared, and Messrs. Smyth, McKenna, Donaghy, and Collins were re-elected directors, and a sum of 175*l.* divided among them.

AT the Kinsale Presentment Sessions held last week, Dr. J. C. Nunan, apothecary, L.A.H., obtained 30*l.* compensation for the malicious burning of his property, the outrage being alleged to have been committed by tenants whom he was about to evict for non-payment of rent.

AN enterprising druggist named D'Arcy is vexing the Dublin perfumers by offering his "Clanbrassiline Hair Restorer" for the modest sum of 1*l.* per packet, adding that its virtues are equal to those sold at 4*s.* 6*d.* per bottle, and inviting the fair sex to try a sample.

AT the Dublin Police Courts last week, a young man named Moore was charged with stealing from the establishment of Mr. Simpson, chemist and druggist, Henry Street, a handcart, valued at 30*s.*, and for selling it by false representation for 4*s.* 6*d.* The accused was remanded.

THE governors of the Cork District Lunatic Asylum have appointed Messrs. Harrington & Sons, Cork, contractors for medicines and medical appliances, and have divided the contract for druggists' sundries between Messrs. Fair & Ridge, Kiloh & Co., and Edward O'Connell, all of them local chemists and druggists.

TENDERS for a year's supply of druggists' sundries are invited by the following public bodies:—The directors of the Great Southern and Western Railway Company, December 9; the Dublin Port and Docks Board, December 11; the Dublin Corporation, December 14; and the Belfast Harbour Commissioners, December 2.

AT the Ligonial Petty Sessions, held last week, Mr. Ingram, chemist and druggist, Ligonial, was summoned at the suit of the Inland Revenue authorities for having sold methylated spirits of wine without having a licence to do so. The defendant admitted the charge, but pleaded that he was ignorant of the law on the subject. He was fined the mitigated penalty of 12*l.* 10*s.*

DUBLIN PHILOSOPHICAL CLUB.—The opening meeting of the winter session was held last week at the University Buildings, Stephen's Green, Dublin, the pharmaceutical profession being represented by Messrs. H. C. Draper, F.C.S. (hon. secretary), William N. Allen, James E. Brunker, M.A., &c. The chair was taken by the President, Professor Stewart, and an interesting lecture upon electricity was delivered by Dr. Molloy.

A DUBLIN labourer named Lee, who was last week charged with smashing the plate-glass windows of Dr. W. V. Furlong's pharmacy, Kingstown, excused his conduct by stating that he owed the doctor a grudge for giving him some time ago a bottle of medicine which "set him on fire." Evidence was given in support of the prosecution, Dr. Furlong deposing that the stone, weighing 10 lbs., was thrown with great force, smashing upwards of 20*l.* worth of goods and narrowly missing himself. The accused was returned for trial.

ROYAL DUBLIN SOCIETY.—Last week the opening meeting of the scientific sections was held in the Royal Dublin Society's buildings. There was a large attendance of the members of the section of mathematics, physics, and chemistry, as well as of the section of geology and biology. The communications were: From Mr. H. N. Draper, F.C.S., F.I.C., "A Table Percentage of Relations to Absolute Alcohol and Proof Spirit of the Alcoholic Beverages in Ordinary Use." From Mr. Arthur A. Rambaut, M.A., "Note on the Conjunction of Saturn and Mars." Professor W. Barrett sent "Magnetic Susceptibility of Ingots of Hadfield's Steel containing from 1 to 16 per cent. of Manganese," and exhibited Sir William Thompson's new magnetostatic ampère meter, milli-ampère meter, and volt meter.

SCOTLAND.

DUNDEE.

EX-BAILIE DOIG, chemist, has been presented with a silver épergne in recognition of his twenty-five years' service as superintendent of the Ward Road Wesleyan Church Sunday-school.

MESSRS. A. B. ANDERSON, J. B. Mason, P. Sandeman & Co., and T. S. Peebles, chemists in different parts of the town, have been appointed by the Parochial Board to supply medicines to the outdoor poor in their respective districts.

THE programme for the first assembly of the Chemists' Assistants' and Apprentices' Association has just been issued. The ball comes off on December 18, and, judging from the programme, it ought to be good.

EDINBURGH.

PROFESSOR FRASER'S inaugural address has given the liveliest satisfaction to the majority of pharmacists in Edinburgh. A few there are, no doubt, who do not believe that the proposed curriculum is either needed or desirable. The wisdom, however, of the professor's observation that to be able to show an increased regard for qualification would facilitate the granting of additional protection, should such be sought, is generally recognised. The interest shown in Professor Fraser's address was well indicated by the demand for THE CHEMIST AND DRUGGIST on Saturday by those who had not been able to attend the evening meeting.

THE UNQUALIFIED SELLER.—The subject of the sale of poisons by unqualified assistants has been freely discussed in this quarter during the last ten days in consequence of the recent prosecution. Some diversity of opinion exists as to the interpretation of the Act. The general feeling appears to be that the decision as it stands is right, however unpleasant it may be. On one point all seem agreed, and that is that the present Pharmacy Act is not in keeping with modern requirements. Apart from the "store" question, in regard to which comparatively little interest is now shown, the Act is insufficient even if it were intelligible, which there appears reason to doubt.

GLASGOW.

THE LIBRARY belonging to the senior Chemists' Association is stored in the Glasgow Apothecaries' Hall, the manager of which has agreed to allow members of the Assistants' Association to have access to it. This privilege the assistants have declined, and they are to take steps to gain possession of the bookcase.

ACTION AGAINST A PAISLEY CHEMICAL COMPANY.—Sheriff Steele has granted interdict against Messrs. Campbell & Co., Cartvale Chemical Works, Paisley, at the suit of a merchant there, from carrying on the distillation of wood and the manufacture of chemicals in the manner adopted hitherto, or in any other way which would be offensive or cause injury to defender and his family.

METHYL SALICYLATE.—A few years ago a local chemist was convicted, under the Sale of Food and Drugs Act, for not giving quite the right thing when methyl salicylate was ordered in a prescription. Mr. John McMillan reports that detectives are so hard up for work just now that two of them called upon him on Wednesday with a prescription, in which "methyl salicylatis" was the principal item. It will take a long time to catch Mr. McMillan.

THE UNQUALIFIED SELLER OF POISONS.—The Glasgow Chemists' and Druggists' Assistants' Association discussed this subject at their meeting on November 27. It was moved by Mr. A. McKellar:—

That in the opinion of this Association the action of the Council of the Pharmaceutical Society in prosecuting an unqualified assistant for selling a poisonous preparation is contrary to the intention of the Pharmacy Act, 1833, and a vexatious interference with the established usage of the trade, and ought, therefore, to be resisted by all legitimate means.

In advocating this motion the speaker argued that if the recent wording of the Act is correct, "being in business" applies as much to the assistant as to the principal, in which event all persons employed as assistants prior to 1868

are entitled to registration as "chemists and druggists." Referring to a well-known local case, in which the Pharmaceutical Society had struck a person's name off the registrar for alleged misstatement as to his status before the passing of the Act, he said if "seller" in the Act denotes exclusively a diplomaed person, then before 1868 the same reasoning must have prevailed, so that "being in business" applied as well to assistants as to masters; and if so, the person referred to had been illegally degraded. At least that was the opinion of a very eminent authority in pharmaceutical politics. The widows clause was an anomaly under the new reading. What need was there to stipulate for the employment of a certificated assistant in the circumstances if it was intended that all assistants should be qualified? Then, too, sections 15 and 17 were hopelessly in conflict as to the definition of "seller." Among other logical deductions from the new doctrine the qualified assistant who sold poisons would have to put his own name and address on the label, and would probably be liable civilly as well as criminally. And, to cap all, the Society's by-law required that candidates for the Minor should have had three years' practical dispensing, though it would be illegal for anyone not examined to carry on even the routine work of a pharmacy. The motion having been seconded, a suggestion was thrown out that, it being so late, the discussion should be adjourned until next meeting, or to a special meeting. It was also moved as an amendment that the question, being *sub judice*, should not be discussed until the final judgment was given. On a division the motion for adjournment was carried by twelve to eleven, Mr. McKellar giving notice of the same motion for next meeting.

ELEGANT PHARMACY was the subject of a paper by Mr. J. Harley at the same meeting. Starting with the idea that modern taste fostered refinements in pharmacy, the essayist proceeded to say that we have received examples of elegancies both from Germany and America. He then spoke of the fall of galenical and the rise of chemical pharmacy, speaking in this connection of synthetical compounds and the introduction of tabloids. New remedies received a share of attention, especially antipyrin, its bad effects being spoken of, especially its property of engendering a species of intoxication. Such preparations as valoids and concentrated liquors and infusions were referred to as being convenient and reliable, and as the chief aims of dispensing were neatness, taste, and elegance, such preparations could be used if they were consistent with the prescriber's purpose. Some words of wisdom fell from the speakers who discussed the paper. Mr. Laing preferred to put up his own preparations rather than sell other people's, and he found customers to be in such a hurry nowadays that it was difficult to get artistic finish in dispensing. Another speaker trotted out the orthodox and somewhat encrusted opinion that fresh infusions are superior to concentrated preparations. Mr. Gilmour expressed his disappointment with the paper. It would have been more serviceable, he thought, if it had dealt with the practical aspects of the subject. In his experience synthetical products were uncertain, and valoids not so stable as tinctures and less active.

Mr. John McMillan, who has done a good deal to encourage elegance in pharmacy, said that he had no misgiving as to the effect that American preparations would have on pharmacy in this country. The thing would ultimately work its own cure. As formulæ became familiar doctors would stop naming special makers, and so pharmacists would be at liberty to supply the preparations made by themselves. Within the last few years he had swallowed pounds of antipyrin, and he had found that when it produced sneezing it relieved headache, but when there was coldness of the extremities that indicated cardiac depression.

INVERNESS.

STATE MEDICINE.—At a meeting of the Chemists' Assistants' and Apprentices' Association held on Monday, Dr. F. M. Mackenzie, M.A., gave an address on "State Medicine." In replying to a vote of thanks, Dr. Mackenzie congratulated the members on the great success of the Association. Since the inaugural meeting bi-weekly classes have been held for the Minor and Preliminary students belonging to the Association.

General and Provincial News.

MR. BEECHAM, of St. Helens, says he is not at present intending to offer his business as a limited company.

THE new edition of the German Pharmacopœia will be published in the German language, but the remedies are to be indicated by their Latin titles.

WE are informed that the applications for shares and debentures in H. H. Warner & Co. (Limited) amounted to over a million sterling.

IT is stated that a highly valuable quicksilver mine has been discovered at Witkoppies, near Malmani, in the Transvaal. The syndicate owning Witkoppies have refused 200,000*l.* for the mine, which is only a small part of their property, and not more than about 50 yards square.

ROYAL INSTITUTION.—The Christmas lectures (adapted to a juvenile auditory) will this year be given by Professor A. W. Ricker, F.R.S. (Professor of Physics in the Normal School of Science and Royal School of Mines), on electricity. They commence on Saturday, December 28.

THE NEW GERMAN PHARMACOPŒIA.—It is rumoured that antifebrin, antipyrin, phenacetin, and sulphonal have been incorporated in the new German Pharmacopœia which will shortly appear; but that lanolin, thiol, and ichthyol have been rejected.

A SERIOUS EXPLOSION occurred on the afternoon of November 11 at the chemical works of Messrs. Wylie & Wallace, Philadelphia. Three men were killed, and several injured, amongst whom was Mr. Joseph Wylie, a member of the firm.

FIRES.—A serious fire occurred on the premises of Mr. Henry Pechey, chemist and druggist, Market Place, Yarmouth, on Sunday evening. Most of the contents of the shop were destroyed, including some post-office property, Mr. Pechey's shop being used as a branch post and money-order office. A small fire recently occurred on the premises of Mr. Corder, chemist, Norwich.

A FIRM of insurance agents in Geneva, Switzerland, are sending out circulars to the local pharmacists pointing out the serious judicial consequences which may befall an Apotheker if he or his employés should make a mistake in dispensing, and offering to insure them against any damages, fines, or law costs to which they may find themselves sentenced. The rate of insurance is small, a yearly subscription of 20*fr.* covering claims up to the extent of 10,000*fr.*

DAN DAWSON BROS. (LIMITED), HUDDERSFIELD.—On Wednesday, November 27, the subscription list opened for this limited company, and closed the following day at 4 P.M. The company propose to take over the business hitherto carried on by D. Dawson Bros., Milnsbridge, Huddersfield, chemical and aniline colour manufacturers. The share capital is 40,000*l.* in 10*l.* shares, of which the vendors will take 1,500 paid-up shares as part of the purchase-money.

SAD DEATH OF A CHEMIST'S ASSISTANT.—On Thursday, November 21, the body of James Waddington, lately an assistant with Messrs. B. & H. Waddington, chemists, Thornton, Yorks, was found in the Ogden Reservoir, near Ovenden. The deceased a short time back gave up his situation and went to America. On his return it was found he was suffering from mental depression. Lately he has been staying with a farmer at Ovenden. Deceased bore an excellent character, was very studious, and seems to have had an idea of preparing for the ministry.

MAKING SURE.—About noon on Sunday a man, when near the Serpentine bridge on the south side of the lake, was observed to take a small bottle from his coat pocket and swallow the contents. He then divested himself of his hat, coat, and vest, and plunged into the water. He swam about 20 yards, and then disappeared beneath the surface. The body, which was soon brought ashore, appeared to be that of a man about 40 years of age. The police have possession of the man's clothes, and also of the phial, which is labelled "Prussic acid."

THE HOLBORN DISPENSER.—At the meeting of the Holborn Board of Guardians on Wednesday night, a letter was read from Mr. Strachan, chief dispenser, tendering his resignation of office, in accordance with the resolution of the Board at their previous meeting. Mr. Ross moved that the resignation be accepted, and that it be a reference to the Dispensary Committee to consider as to the desirability of filling the vacancy. Personally he (Mr. Ross) thought there was no necessity, Mr. Strachan having shown that there was one too many. The matter was referred as suggested.

THE DRUG TRADE ON THE PACIFIC COAST.—The *Oil, Paint, and Drug Reporter's* San Francisco correspondent records the formation of a new and powerful factor in drug circles on the Pacific coast, viz., the incorporation of the Ogborn Drug Company, 310 Pine Street, San Francisco, with a capital stock of \$500,000. The incorporators are among the leading local capitalists. Mr. M. E. Ogborn, the president, obtained his first experience in handling drugs about thirty years ago with Suire, Eckstein & Co., of Cincinnati, who will be remembered as heavy operators in those days. He subsequently became connected with Richardson & Co., of St. Louis, and then with Redington & Co., of San Francisco, as manager of their branch in Portland, Oregon.

ARSENICAL POISONING.—At an inquest held by the Devonport coroner on Monday on the body of John Dobson, 54, a master mariner, Mr. G. A. Rae, surgeon, stated that he had been called in to attend deceased, but he was too far gone. He had made a post-mortem examination of the body. The stomach contained fluid showing traces of arsenic, which had been retained, together with some fatty matter. The arsenic appeared to have been recently taken, and, in the doctor's opinion, it might have been taken as a stimulant or nerve tonic. In the diseased state of the organs there was sufficient arsenic in the stomach to have caused death. This view the coroner agreed with, and the jury returned a verdict accordingly.

A WHOLESALE DRUGGIST'S TRAVELLER CHARGED.—At the Worship Street Police Court on Monday, November 25, Charles Stansfield was brought up on remand and charged with having stolen a gun, the property of Messrs. Oppenheimer Brothers, wholesale druggists, &c., of Sun Street, Finsbury, by whom he was employed as traveller. A further charge was also preferred against him by the same firm for embezzling 30*s.* Mr. St. John Wontner prosecuted, and the prisoner was defended by Mr. Geoghegan and Mr. Lawless, instructed by Mr. Brown, solicitor. The magistrate, after hearing evidence for the prosecution, said the case was entirely one for a jury. Mr. Geoghegan assented to this, defence being reserved. The prisoner was committed for trial, bail to the extent of 200*l.* being accepted.

RUSSIAN PHARMACEUTICAL CONGRESS.—The Russian pharmaceutical societies held their annual congressional meeting in St. Petersburg on November 5, the attendance list numbering over 230 names, which is considered exceptionally good. After having acknowledged with three rousing cheers, says the report, the "act of Imperial condescension and grace" by which the Czar had given his permission for the convocation of the congress, Professor Tichomiroff, of Moscow, and Emeritus Professor Trapf, of St. Petersburg, were elected honorary presidents, and Apotheker A. G. Forsmann was called to the chair. Among the principal papers read were communications by Professor W. A. Tichomiroff on "Strophanthus and Resorcin Spectra," and by Apotheker W. K. Ferrein on "Current Pharmaceutical Questions."

INSUFFICIENT WATER-SUPPLY.—Mr. R. Hayton Davis, pharmaceutical chemist, of Harrogate, has successfully prosecuted the Harrogate Waterworks Company for not supplying him with water on November 11. Mr. Davis's house is in Regent Parade, and it seems that some alteration of the piping was required. This was commenced and completed by November 7. Prosecutor wrote to the company to put on the water, but they did not do so, although the only reason he could assign for it was that he had charged the company 5*s.* for knocking up the pipes of the house next door, and which sum he paid to have them reopened. After other evidence had been adduced, the bench were unanimously of opinion that the defendant company were not

justified in refusing to supply the complainant with water, and they inflicted a penalty of 1*l.* and costs.

THE SEQUAH.—One of the famous medicine men has been performing during the past week at Dover and another at Sheffield. We also hear of him, or them, at Manchester and at Hereford. At Dover several well-known rheumatic inhabitants were sent with a firm step from the caravan after treatment, and the popularity of the "Indian" ran very high. At one time a rumour got about that some of the shopkeepers were agitating the Council to get the proceedings stopped, and a well-known chemist in the town was particularly referred to, and "the man in the street" got very angry indeed; but these rumours seem to have been unfounded. The Sheffield Sequah, on the other hand, who is understood to be the same as the one who drew audiences of 25,000 to 50,000 at Leeds, is not apparently satisfied with his reception in the cutlery capital. He indignantly complains of having been insulted on the first day by some member of the police force denouncing him as a fraud, and as "being connected with a previous visitor." He threatens to leave the town very shortly, not being accustomed and not caring, he says, to address a few dozen people.

COMMERCIAL BAROMETER.—Sir Rawson W. Rawson, in "Imperial Federation," commenting on the Board of Trade returns for October, says they exhibit satisfactory results, especially as regards volume of trade. If the increase of the import trade has not been as great as in September, there has been a large increase in the export trade, which showed a decrease in September. The advance in prices is only moderate. The following are the readings:—

OCTOBER, 1889, COMPARED WITH OCTOBER, 1888.

A.—Imports.

1. Tonnage of vessels entering United Kingdom has increased from—
2,506,000 to 2,670,000 = 6.5 per cent.
2. Value of imports has increased from—
35,022,000*l.* to 38,195,000*l.* = 9.0 per cent.
3. Average price per ton has increased from—
14*l.* to 14*l.* 6*s.* = 2.1 per cent.

B.—Exports.

1. Tonnage of vessels clearing from United Kingdom has increased from—
2,822,000 to 3,093,000 = 9.6 per cent.
2. Value of exports has increased from—
26,559,000*l.* to 29,543,000*l.* = 10.0 per cent.
3. Average price per ton has increased from—
9*l.* 9*s.* 7*d.* to 9*l.* 11*s.* = 0.7 per cent.

C.—Coal Exported.

1. Quantity of coal exported from United Kingdom has increased from—
2,504,000 to 2,608,000 tons = 4.0 per cent.
2. Average price per ton of coal exported has increased from—
8*s.* 7*d.* to 10*s.* 5*d.* per ton = 20.7 per cent.
3. Quantity of bunker coal shipped in foreign trade has increased 10.7 per cent.

D.—Exports (exclusive of Coal).

1. Tonnage clearing from United Kingdom has increased from—
1,152,000 to 1,354,000 = 17.5 per cent.
2. Value of exports has increased from—
25,683,000*l.* to 28,183,000*l.* = 9.9 per cent.
3. Average price per ton has decreased from—
22*l.* 6*s.* to 20*l.* 16*s.* = 6.7 per cent.

The most notable features in the above calculations are that, while the tonnage of exports exclusive of coal, which represents quantity, has increased 17.5 per cent., and the value of such exports has increased 9.9 per cent., the average value per ton has decreased 6.7 per cent., and that there has been a large increase, instead of a continuous decrease, in the exportation of foreign and colonial merchandise. This is almost wholly accounted for by the great increase in the export of bulky and low-priced metals, while there has been a decrease in that of the more valuable yarns and textile fabrics. The prices also of metals exported have fallen off, with the exception of iron and steel, which have risen by only 1.5 per cent. There has been a large decrease (34 per cent.) in the quantities of wheat and wheaten flour imported, which has nearly counterbalanced an increase in other articles of food, amounting to 14.2 per cent.

Mr. C. SHARLAND, the acting partner in London of Messrs. Sharland & Co., Auckland, New Zealand, left on Thursday by the *Ballarat* on a six months' visit to his home. He was accompanied by his friend, Mr. A. E. Baylis (Gilles & Baylis). On Tuesday evening their mutual friends, to the number of forty, entertained them to dinner in Blanchard's Restaurant, Regent Street. The guests were toasted very heartily, and in reply Mr. Sharland spoke briefly, but feelingly, of the pleasant times he had spent in London, and of the close ties between the sovereign city of the world and the colonies. Later in the evening Imperial federation became one of the leading topics, and Mr. S. M. Burroughs, speaking as "a citizen of the world," and on behalf of the colonies, said that Australasia was one of the finest countries he knew of, and he trusted that the legislative assemblies would pursue no further the mad policy of protection, but would in liberal-minded spirit weld themselves to the old country in such a manner that trade and prosperity would go on unimpeded by artificial restrictions. Mr. W. C. Gilles made an excellent chairman, and his efforts were well seconded by Mr. F. W. Lucas, who sat in the vice-chair, and who, we believe, made the arrangements, which were in every respect a success.

Personalities.

Mr. JOHN GARDNER has purchased the business lately belonging to Mr. Charles Radford, Broomhill, Sheffield.

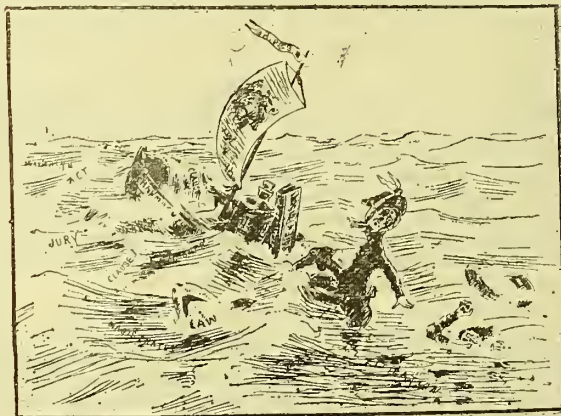
Mr. W. FOWLER, of 14 Vine Place, Borough Road, Sunderland, has sold his business, through the agency of Mr. F. J. Brett, of Leicester, to Mr. W. Scott, of Houghton-le-Spring.

Mr. F. C. CLAYTON, the new Mayor of Birmingham, who, as we have already stated, was nurtured in pharmacy, has promised an annual chemistry prize of 5*l.*, to be competed for at the Midland Institute, Birmingham.

Mr. H. MADDOCK has purchased the business of the late Mr. C. Lord, of Todmorden. Mr. T. Tomlinson, of Manchester, valuer for the buyer, and Mr. F. J. Brett, of Leicester, for the executors.

PROFESSOR GEORG DRAGENDORFF, of the Dorpat University, will commemorate on December 21 (December 9 old style) the completion of the twenty-fifth year of his connection with the Dorpat University. Professor Dragendorff was born at Rostock, in Germany, in 1836, and studied pharmacy in his native town. In 1862 he went to Russia as editor of the Russian Pharmaceutical Journal, acting at the same time as secretary to the St. Petersburg Pharmaceutical Society. Two years later he was appointed Professor of Pharmacy at Dorpat.

THE PHARMACEUTICAL JONAH.



SKIPPER (to the Unqualified): I am sorry for you, and will give you a good character; but I can't get along in a sea like this with you on board. So over you go.

Jegal Reports.

DOBSON v. PRICE.

GEORGE DOBSON, chemist, brought an action at the Leicester County Court on November 15 against T. U. Price, chemist and druggist, of Arundel and Barking, to recover 12*l.* 2*s.* for goods supplied. Plaintiff stated that the goods were ordered last April, and returned to him on June 19. The defence was that the goods were ordered on sale or return, but this was denied. Judgment was given for the full amount claimed.

THE SALE OF MEDICATED WINES.

At the Birkenhead Police Court on Friday, November 22, Mr. Thomas Davies, chemist, Rock Ferry, was summoned at the instance of the Inland Revenue authorities for selling foreign wine without a licence. Mr. Wolfenden, supervisor, prosecuted, and said there were two penalties connected with an offence of this character—one of 50*l.* under an Act of George IV., and another of 20*l.*, under the Act 23rd Vict., chap. 27, sec. 19. They only pressed for the latter penalty. Retailing wine was defined by the Act 23rd Vict. as selling a quantity not exceeding two gallons. In this case only a single bottle was purchased. The defendant's premises were visited on August 21 by Mr. Wills, an Excise officer, who purchased a bottle of "Coleman's Meat and Malt Wine," for which he paid 2*s.* 6*d.* Perhaps the worst feature of the case was that the defendant appeared to have been aware that he had no right to sell it without a licence, for he admitted as much to the officer. A sample had been analysed at Somerset House, and it was shown to consist in the main of foreign port wine. There had been several cases of a similar kind in the borough recently, but this case was the only one the Commissioners had thought right to bring before the court, the others having been settled by the payment of a fine and a warning. Evidence corroborating this statement was given by Mr. Wills, who added that defendant remarked to him when he asked for the wine that they had to be very careful, as there had recently been a raid on chemists in the borough for selling methylated spirits. Before such wine could be sold the retailer had to obtain permission from the magistrates and take out a licence, which cost 2*l.* 10*s.* per annum. Defendant pleaded that they had to dispense at all hours, and it was often a matter of life and death. He did not suppose, however, that he sold one bottle of Coleman's wine in twelve months. They only kept it to oblige medical men; but in future he would refer people who asked for such things to the public-houses, and he knew they could not get them there. A fine of 20*s.* and costs—2*l.* 6*s.* 6*d.* altogether—was imposed.

INDECENT ADVERTISEMENTS.

At Marylebone Police Court on Saturday, a man named Martin was charged with distributing a quack doctor's handbills, to the annoyance of a gentleman living in the Adelaide Road. The prisoner deposited one of the bills in the prosecutor's letter-box, and then went to other houses. The prosecutor, finding out the nature of the document, went for a policeman and gave the prisoner into custody. Mr. Cook said that a new Act of Parliament would come into force at the beginning of next year which would make conduct of this kind a criminal offence, not only against the person distributing the bills, but especially against the person causing the bills to be distributed. He discharged the prisoner, and told the prosecutor that he considered he had acted very properly.

MALICIOUS DAMAGE.

A CURIOUS and novel question associated with a prosecution under the Sale of Food and Drugs Act came before the Queen's Bench Division of the High Court on Tuesday. A Mr. Hall had been prosecuted and fined for supplying milk diluted with water; he had discovered that his carter, Richardson, who supplied the diluted milk, had accidentally

spilt some, and to make up the quantity had added as much water. Hall therefore prosecuted Richardson before Mr. de Rutzen, at the Marylebone Police Court, under the Malicious Injuries to Property Act, 24 and 25 Vic., c. 97. Mr. de Rutzen discharged Richardson, being of opinion that no offence had been proved under the Act. The complainant appealed, but Lord Coleridge and Mr. Justice Mathew concurred in a judgment upholding the magistrate's decision. They considered it was necessary to show the *mens rea*, or guilty mind, and they held that the defendant intended no injury to anyone, certainly not to the master. If damage was done, no criminal offence was proved.

THE MERCHANDISE MARKS ACT AND THE SALE OF MINERAL WATERS.

In the Queen's Bench Division, London, on Tuesday, the Lord Chief Justice and Mr. Justice Mathew, sitting as a Divisional Court, had before them the case of Wood v. Burgess, in which their opinion was asked for by one of the metropolitan magistrates on a question which had been raised under the Merchandise Marks Act, 1887.

Mr. Horace Avory appeared for the plaintiff, and stated that the point raised was whether a person who sold goods with a false trade description attached to them committed an offence against that statute, although he had no intention to defraud the particular person who purchased them. The magistrate held that to constitute an offence under the Act it was necessary there should be a fraudulent intent, and he found that in this particular instance there was no such intent. His decision was in direct conflict with the decisions of other magistrates in the metropolis, and was also in conflict with decisions under the old Merchandise Marks Act of 1862. The respondent, Burgess, was a mineral-water manufacturer, carrying on business close to the appellant, who was in the same trade. After manufacturing the mineral water the respondent put it into bottles which bore the name and trade description of the appellant, and then sold them. Before selling them, however, the respondent said he put a small paper label on the bottom of each bottle, and when delivering to the particular customer called in the case an invoice was sent showing that the mineral water was his own manufacture. The contention of the appellant was that as soon as the respondent sold goods which bore the trade description of another person he committed an offence under the Act. But the magistrate dismissed the summons on the ground that the intent to defraud was a necessary constituent of the offence, and that no such intent was shown on the part of the respondent, because of the fact that the label was found on the bottle, and that the invoice was sent to the purchaser. The learned counsel submitted that the object of the Merchandise Marks Act was to protect the owner of the trade-mark or of the description, and not the purchaser of the goods. Although in this case the immediate purchaser, a publican, stated that he knew the goods were not manufactured by Woods, still the ultimate purchaser might be deceived.

Lord Chief Justice Coleridge observed that a similar case would be that in which cigars were manufactured at Greenwich, and placed in boxes having labels purporting that their contents were made in Havannah.

Mr. Avory said there would be very little likelihood of the ultimate purchaser looking at the small label on the bottom of the box, or having any means of seeing the invoice of the tobacconist.

Mr. Justice Mathew remarked that still in such a case nobody was imposed upon according to the finding of the magistrate.

The respondent was not represented by counsel.

Lord Chief Justice Coleridge said it appeared the magistrate had found that the respondent had applied a false description not only to the bottle, but to the contents of the bottle. The case accordingly came within the third sub-section of section 3 of the Act, and the magistrate therefore had come to a wrong decision.

Mr. Justice Mathew concurred.

The case was remitted back to the magistrate with the intimation that in the opinion of the Court he ought to have convicted.

H. H. WARNER & Co. v. J. WARNER.—THE "SAFE" CURES CASE.

IN the Chancery Division of the High Court of Justice on Tuesday and Wednesday, before Mr. Justice Stirling, the action at the instance of H. H. Warner & Co., proprietors of the well-known "safe" cures, against J. Warner came on for hearing. Mr. Hastings, Q.C., who, with Mr. John Cutler, appeared for the plaintiffs, in opening the case, said that this was an action to prevent the defendant from passing off his goods as those of the plaintiffs. His lordship had already granted an injunction upon the motion of the plaintiffs, and the defendant took that decision to the Court of Appeal, where, however, his lordship's judgment was upheld, Lord Justice Lopes going so far as to say that this was the grossest case of fraud he had ever heard of. The plaintiff company carried on business in London and New York as proprietors of certain medical compounds known as "Warner's safe remedies." These compounds were—Warner's safe cure, Warner's safe rheumatic cure, Warner's safe diabetes cure, Warner's safe nerve, and Warner's safe pills. Their trade mark consisted of the words, "H. H. Warner's safe cure," and was registered November 9, 1886. Their goods were not only known under their full title, but were often described and ordered as "Warner's cures" and "Warner's safe cures," and their safe rheumatic cure was frequently ordered as "Warner's safe cure for rheumatism," and sometimes as "Warner's cure for gout." They claimed that the expression "Warner's cure" denoted their medical compounds, and no other, and the complaint was that the defendant was selling certain preparations under the titles of "Warner's cures," one being described as "Warner's gout and rheumatic cure." The defendant was originally a carpenter, but had bought the business of a Mr. H. Ashton, in Chancery Lane, in July, 1888, and he claimed to be entitled to sell these preparations and to use his own name to describe them.

Mr. Macpherson, manager in London for the plaintiff company, gave evidence as to the repute of Warner's compounds under the titles of "Warner's safe cures." They had spent a very large sum upon advertising these remedies in Great Britain and America, and they had sold a million bottles of these cures. In cross-examination by Mr. Terrell for the defendant, witness stated that Mr. Warner, the plaintiff, had been carrying on this business for ten years, before which time he was a fire and burglar proof safe manufacturer in New York.

Mr. Kennard, traveller in the plaintiffs' employment, Mr. Fisher, and other witnesses, were examined, and gave evidence as to the high reputation of the plaintiffs' goods, and also as to the order and purchase of the samples of the defendant's goods on which this action was taken. They also spoke to the similarity of the description, bottle, and make up of the defendant's goods with those of the plaintiffs'.

Mr. Beulah, of the Nottingham Drug Stores, said that his house did a large business in the plaintiffs' preparations. They purchased between 5,000*l.* and 6,000*l.* worth of them in the last twelve months. Anyone who had not seen them before would probably be deceived into thinking that the defendant's preparations were those of the plaintiffs'.

Mr. Rodney Wilson, buyer at Barclay & Sons' (Limited), Farringdon Street, said his firm dealt largely in the plaintiffs' goods for the last four years. During the past year they bought about 2,500*l.* worth. He had seen the bottles and packets of the defendant, and the defendant's packages might be calculated to deceive the public into the belief that they were the plaintiffs' if they had never seen the plaintiffs' ones.

Mr. Thomas Richardson Lee, assistant in Taylor's Drug Company, retail chemists in London, Leeds, Dewsbury, and elsewhere, said his firm dealt largely in the plaintiffs' preparations, which he had known for about six years. They were ordered over the counter as Warner's cure, Warner's safe cure, Warner's rheumatic cure, Warner's nerve. He had had some orders for Warner's gout and rheumatic cure. In his experience, the word "safe" was very seldom used, and the expression "Warner's cures," when used by the public, applied to the plaintiffs' preparations. It was the same when any addition, such as "gout," was made. He did not know the defendant's preparations. Shown bottle of defendant's preparation, entitled "Warner's gout

and rheumatic cure," witness said he considered it could be passed off to the public as the plaintiffs' preparation, because of the name "Warner." In cross-examination he said that any preparation sold under the name of "Warner" would be calculated to deceive the public if it were not the plaintiffs' manufacture. He had not known of any instance in which anyone had been deceived by them.

This closed the evidence for the plaintiffs, and Mr. Hastings said that, in asking for the injunction, he would not ask for damages, because he was sorry to say that the defendant had been ordered to pay the costs of the former motion, and the account was returned to the office as *nulla bona*; but he asked for costs.

Mr. Terrell was about to open the case for the defendant, when

His Lordship said it might save time if Mr. Terrell called his witnesses at once, as it was a pure question of facts.

Evidence for the defence was then called.

John Warner, the defendant, examined by Mr. Terrell, said he carried on business in Chancery Lane as manufacturer and vendor of patent medicines. He had purchased in July, 1888, Ashton's business, which had been carried on for the sale of Ashton's gout and rheumatic cure and Ashton's asthma cure. He produced the labels formerly used by Ashton, and those subsequently used by himself. Shortly after acquiring the business he altered the name of the preparations because business was rather dull, and Ashton's name had not been in very good repute with the advertising agents, he not having paid them. Witness did not know that till the agents told him. In making the change he had no intention to get benefit from the plaintiffs' reputation, or to deceive the purchasers, and induce them to believe that they were buying the plaintiffs' preparations. He had looked through his orders, and, with the exception of the two of Fisher and Kennard, he had never received an order for a "safe" cure, nor had he ever sold any of his preparations as "safe" cures. Witness was not at his place of business when the orders from Fisher and Kennard were received. His clerk wrote the replies to those orders. That clerk left his employment about six weeks ago. He did not know that his preparations were sent in answer to those orders until the following day. He had spent about 1,500*l.* on advertising his business since he bought it.

Cross-examined by Mr. Hastings: He was formerly a carpenter. He still carried on business sometimes as a carpenter. Before July, 1888, he could not recollect that he had ever heard of Warner's safe cures, though he could not pledge his oath that he had never heard or read of them. He had not known Ashton before, and knew nothing of him now, and had not called him as a witness for the defence. He first went into partnership with Ashton, but Ashton broke his contract. The contract was in writing. He had not brought the contract with him, but could produce it. He found that the business was not so good as Ashton had represented it to be, and he complained, and Ashton resigned the business for the money witness had already invested in the share of the business, which was 80*l.* No reference whatever to the plaintiffs' business passed between them. He now doubted whether the man's name was Ashton at all. He put "Warner," successor to Ashton," at first, not because it was likely to improve the business, but because he wanted to put his own honest name to it. His own name was not known in connection with medical preparations. Any reputation his business then had had been obtained under Ashton's name. He put "Warner, successor to Ashton," because he wanted to trade under his own name, the business being then his. He had heard by that time of Warners, the plaintiff firm, but in changing the label it did not strike him that he was encroaching upon them. He had had orders since this litigation commenced intended to catch him. They were from chemists. He did not execute these orders. (Shown account for advertising in the *Gloucester Times*.) He never had advertised there; Ashton had. That account would be for H. H. Warner & Co. (Laughter.) After further examining the account, witness said it was all against Ashton. Witness resided at 18 Maitland Park Road, Haverstock Hill. He had only one room in Chancery Lane, his business premises. An execution was put in for the costs in the former motion. They were never paid.

This closed the evidence for the defence.

The case was adjourned until Thursday for the production of documents in the possession of the defendant.

The hearing of the case was resumed on Thursday morning, when Mr. Terrell, defendant's counsel, produced the partnership contract between Ashton and the defendant, dated 14th July, 1888, and the agreement by which defendant obtained sole possession of Ashton's business, of date 23rd August, 1888.

Mr. Terrell addressed the Court on behalf of the defendant, contending that the defendant had a right to use his own name of Warner as applied to his own medical preparations, and that the defendant had not sold his preparations as those of the plaintiffs, or that he had any intention to sell them as such. Being entitled to use his own name in the conduct of his own business, the onus of proving intention rested with the plaintiffs, and he submitted that they had utterly failed to prove any intention on the part of the defendant to pass off his goods as those of the plaintiffs.

Mr. Hastings, for the plaintiffs, said that the only question was this—Was the defendant making a dishonest use of his own name to trade upon the reputation of the plaintiffs—

His Lordship (interrupting) said he thought so too. He thought the defendant was not honest in it, and the only question on which he wished to hear Mr. Hastings was on the form of the order.

Mr. Hastings asked that the former interim injunction be made perpetual.

His Lordship said he was not sure that that would be right. He had no evidence at present that anybody had been deceived. That he did want to get the benefit of the reputation of the plaintiffs' goods he did not doubt.

Mr. Hastings said there was evidence of gentlemen in the trade that selling them as he had done would, or might, induce the public to believe that they were the plaintiffs' goods.

His Lordship then assented to making the interim injunction perpetual. In giving judgment he pointed out that the business acquired by the defendant was that of Ashton, that the preparations which Ashton sold had been sold as Ashton's, and whatever reputation they had acquired in the market was as Ashton's, and not as Warner's. It was true that every man had a right to carry on his own business in his own name. That had been recognised ever since the case of *Burgess v Burgess*. But it was subject to this qualification—that he did it honestly. The defendant had given his explanation of how he came to change the name from Ashton to Warner, and up to a certain point his lordship hesitated to say that there was fraudulent intention. But the plaintiffs laid a trap for the defendant by writing two letters, one for a bottle of "Warner's safe cure," and another for a bottle of "Warner's safe rheumatic cure." If the defendant and his servants had been trading honestly, it appeared to his lordship plainly from the evidence that they would not have sent the defendant's medicine in answer to those letters. His lordship agreed that it was a trap and that the defendant fell into it; but in his view, if the defendant had been honest he would not have been found there, and in his opinion that was the explanation of what the defendant's intention was in changing the style of his advertisements from "Ashton's" to "Warner's." That also was the view taken by the Court of Appeal on the interim injunction, and his lordship thought that the case stood now precisely in the position in which it was then. He therefore granted an injunction to restrain the defendant from selling, offering for sale, or in any manner representing or procuring to be represented, his goods as the goods of the plaintiffs, or in such a manner as should lead to the belief that they were the goods of the plaintiffs.

The order was accordingly granted, with costs.

TINCTURES AND THE SALE OF FOOD AND DRUGS ACT.

At the Stockton-on-Tees Petty Sessions on November 28, Joseph Power, chemist and druggist, Victoria Terrace, Stockton, was summoned by the inspector, acting under the Sale of Food and Drugs Act, for having sold half a pint of tincture rhubarb B.P., which, according to the certificate of Mr. W. F. K. Stock, the public analyst for Durham county, was not of the nature and substance of the article demanded. It was alleged in the analyst's certificate that

in extractive matter the tincture purchased was found to be 25 per cent. below that yielded by the B.P. tincture.

Mr. Stock was the principal witness for the prosecution, and, putting in his certificate as above, was subjected to a lengthy cross-examination, the object of which was to show that the extractive from the root varied so much that the residue from the tincture could not be relied upon as a test.

Mr. Glaisyer, of Birmingham, who conducted the defence, contended that the tincture made in accordance with the Pharmacopœia directions would necessarily vary considerably in residue. The dry rhubarb contained soluble and insoluble constituents in variable quantities, no two being alike, and therefore the constituent extracts must vary in different samples.

Mr. Charles Umney, of the firm of Wright, Layman & Umney, London, deposed that his firm supplied the tincture to defendant with a warranty. He repeated, from his experience as a manufacturer, that he had found the drug to vary as stated. He had found 3.8 to be the lowest amount of the extractive from the tincture, and 5.2 the highest. He had analysed this sample, and had found it to yield 4.25 parts of extractive when dried at 212° F. until it ceased to lose weight.

Mr. Power, the defendant, deposed to receiving the drug from the firm in question and selling it as it was received.

Mr. Freeman, laboratory man in the employment of Messrs. Wright, Layman & Umney, deposed to having made the tincture in accordance with directions produced.

Ultimately the Bench stated they were clearly of opinion that defendant purchased the tincture under a warranty, and they had no reason to believe that he had tampered with it. They therefore dismissed the summons, but refused to allow costs.

BANKRUPTCY REPORTS.

EDWARD LLOYD, Keeling's Lane, Northwood, Staffordshire, Chemist, &c.

THIS debtor appeared at the Hanley Bankruptcy Court on November 22 for his public examination. In reply to the Official Receiver, he repeated the particulars of his business career reported by us last week. When, in 1883, he started the business at Keeling's Lane, he had a capital of 40*l.*, his furniture being worth 11*l.* The capital was lent by his wife, who became possessed of a considerable sum on the death of her father, and none of the money had been repaid. His takings when he commenced were about 2*l.* weekly, but they gradually rose to 4*l.*, and his trade expenses were small, as he had no assistant. The combined rental of the house and shop was 6*s.* per week, and the rates and taxes amounted to 5*l.* a year. Five years ago he bought the house and shop, together with the adjoining property, for 350*l.*, paying 5*l.* down, and borrowing the remainder of the purchase-money from the North Staffordshire Permanent Building and Investment Society at Hanley. He then occupied the whole property, using one shop as a store-room. His receipts rose to 5*l.* a week. He sold patent medicines, and the profit, averaging 100 per cent., was sufficient to keep him with the small expenditure he was under. He purchased goods on credit, and prior to 1884 was able to pay his way without inconvenience. The receipts continued at 5*l.* a week for about twelve months, and then they began to fall off because he was not able to keep up the stock. At that time he was buying from hand to mouth, and the profits were proportionately lower. In February last Messrs. Dobie & Mason, seedsmen, Manchester, pressed him for payment on an account of 65*l.*, and he obtained aid from friends. Mrs. de Beauregard, of Hanley, his sister, lent him 28*l.*, and further sums at later dates. He communicated with some of the creditors, and a statement was issued in September by his solicitor, which showed the liabilities to be 181*l.* 9*s.* 6*d.*, and the assets 60*l.* Only four of the largest creditors were mentioned in the statement, viz. Dobie & Mason, 62*l.* 0*s.* 2*d.*; Hirst, Brooke & Hirst, Leeds, 43*l.* 14*s.* 6*d.*; John Matthew, Liverpool, 47*l.* 9*s.* 1*d.*; Mrs. de Beauregard, 28*l.* 5*s.* 9*d.* On the asset side of the account, the value of the property, after deducting the mortgage, was not stated. The intention was to offer the creditors 10*s.* in the pound, and the largest creditors were

mentioned because he was only asked for them. He did not supply the information as regards the assets. In his sworn statement in the bankruptcy proceedings the liabilities were stated at 243*l*. He had kept a book showing receipts and payments, but not a regular cash-book. The deputy-registrar commented on the fact that the equity of redemption, valued at 96*l*., was not mentioned in the statement issued to the creditors, from which one-third of the twenty-three trade creditors were also omitted. The statement was thus very misleading, the assets showing 6*s*. 8*d*. in the pound. The debtor said he was under the impression that some of his relations had made themselves responsible for some portion of the debts, and this accounted for them being omitted. The deputy-registrar said the statement was a most incorrect and improper one, because if the equity of redemption had been included it would have shown 16*s* in the pound, and the creditors could not then have been asked to accept a composition of 10*s*. Mr. Huntback (debtor's solicitor) replied that the property, under a forced sale, would not realise more than the mortgage and the costs. The examination was closed.

Re FREDERICK GIBSON, Fleetwood, Chemist.

THIS debtor appeared at the Preston County Court on November 26 to make application for his discharge, Mr. Clarke, solicitor, of Fleetwood, attending as his legal adviser. The Official Receiver reported that a receiving order was made on July 3 last. The liabilities were stated to be 403*l*., but proofs were admitted for 416*l*. The assets were estimated at 241*l*. 17*s*. 11*d*., and they produced only 126*l*. 7*s*. 2*d*. A dividend of 4*s*. 0½*d*. in the pound was paid. The bankrupt commenced business in 1873 without capital, had not kept his books properly of late, and had not thought it necessary to preserve the older ones. He could not make out a deficiency account, and no doubt he was insolvent and knew it for several years before he stopped. He (the Official Receiver) realised as trustee, the estate producing 131*l*. 7*s*. 2*d*. Beyond the costs of the petition, and the fees payable to the Board of Trade, the total costs did not exceed 12*l*. 7*s*. 11*d*., a fact he wished to mention, because the expenses of bankruptcies were often exaggerated. If debtors would do nothing more in the way of bookkeeping than keep a simple cash-book, in which they entered what they received and paid, the Court could see how they traded. Mr. Clarke said that it was chiefly through ill-health that the bankrupt had not kept his books during the last few years. It was his intention, if ever he got into the position to do so, to pay all his creditors in full with interest. The debtor was called, and stated that as a rule chemists did not keep books. His Honour, Judge Coventry, said the debtor had unfortunately put himself in a position where there was a stain upon his character. He disagreed with the statement that chemists did not keep books, and, moreover, it was a statutory requirement that all traders should do so. Although the debtor had said that he did not know he was insolvent until May, it was clear he must have known before. He had, however, had expectations which had been dissipated by the death of his wife. Under the circumstances he should suspend the discharge for nine months.

Re SARAH JANE LEIGHTON, 12 Elvet Bridge, Durham,
Chemist and Druggist.

THIS debtor, who is described as the widow, surviving executrix, and trustee of John Hunter Leighton, attended at the Durham Bankruptcy Court on November 26 before Mr. Registrar Marshall for her public examination. The statement of affairs showed—unsecured creditors, 373*l*. 8*s*.; creditors fully secured, 616*l*. 10*s*.—estimated value of securities, 1,000*l*.; surplus, 383*l*. 10*s*.; creditors partly secured, 2,075*l*. 11*s*. 7*d*.—less estimated value of securities, 983*l*. 10*s*.; leaving 1,092*l*. 1*s*. 7*d*.; other liabilities, 203*l*., of which it is expected will rank against the estate for dividend 200*l*.; expected to rank, 1,635*l*. 9*s*. 7*d*.; gross liabilities, 3,265*l*. The assets are as follows:—Cash in hand, 6*l*. 2*s*. 11*d*.; stock-in-trade, 120*l*.; machinery and trade fixtures, fittings, &c., 60*l*.; furniture, 60*l*.; one share in Chemists' Aerated Waters Association, 1*l*.; total, 241*l*., estimated to produce 201*l*.; book debts, good, 213*l*. 10*s*. 5*d*.; doubtful, 25*l*. 7*s*. 8½*d*., bad, 10*l*. 3*s*. 5½*d*., estimated to produce 25*l*. 7*s*. 8½*d*.; total,

446*l*. 1*s*.; leaving a deficiency of 1,219*l*. 8*s*. 7*d*. The Official Receiver observes:—The debtor continued the business she now carries on as a chemist and druggist since the death of her husband on April 2, 1878. She states that her husband was in partnership with Dr. Watkins at Gosforth as aerated-water manufacturers, and that she continued in the partnership after her husband's death, and she believes that all debts belonging to the partnership are paid. This business was carried on at a serious loss. She has not given any bill of sale upon her stock-in-trade, furniture, or other personal effects; that she kept on paying debts as far as possible until the date of the petition; that she had not within the last twelve months incurred any losses other than losses in trade, nor given any accommodation bills, nor pledged any property; and that her income had been about 156*l*., and her household and personal expenditure about the same amount. The income and expenditure have, however, been larger than this. The above liabilities include about 2,600*l*. secured and 100*l*. of unsecured amounts, which the Official Receiver thinks might ultimately prove to be from her husband's estate, and not from her, and it is very doubtful indeed whether more than 550*l*. of the above amount of the unsecured debts can rank against her estate. As to assets, it is most difficult, in the light of recent decisions, to say if any of the assets above mentioned can be divided among her creditors (among whom, it seems probable, all the trade creditors will have to be reckoned), and the 60*l*. of furniture certainly cannot. The mortgagee of the property in Elvet Bridge is willing to join with the owner of the business in selling the entire business and building as a current going concern, as he has power to do so.

Gazette.

PARTNERSHIPS DISSOLVED.

Foster, N. S., & Yourell, J. B., Hampstead Road, N.W., surgeons.
Fry & Fraser, Swansea, medical practitioners.
Godfrey, B. G., & Pulling, H. J., Balham and Upper Tooting, physicians and surgeons.
Imm & Hedges, Smethwick, mineral-water manufacturers.
Pepper, John & Co., New Oxford Street, W.C., wholesale and manufacturing chemists and druggists, and manufacturers of medicinal and other specialities.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDERS.

Holey, George, Beverley, botanic and eclectic practitioner.
Porter, Richard, jun., Lewes, late of Winchcombe, veterinary surgeon.
Richmond, William Wilkinson, Penrith, chemist and manufacturer of artificial teeth.
Tyrell, Charles, Southampton, drug dealer.

FIRST MEETING AND PUBLIC EXAMINATION.

Richmond, William Wilkinson, Penrith, chemist and manufacturer of artificial teeth—Dec. 2, Official Receiver's offices, Carlisle; Dec. 2, Court House, Carlisle.

ADJUDICATIONS.

Evans, John Robert, Denbigh, chemist and druggist.
Porter, Richard, jun., Lewes, late of Winchcombe, veterinary surgeon.
Richmond, William Wilkinson, Penrith, chemist and manufacturer of artificial teeth.
Tyrell, Charles, Southampton, drug dealer.

APPLICATION FOR DEBTOR'S DISCHARGE.

Hillier, H. J. (trading as the Oil of Sahara Company, and as J. Belleine & Co.), Praed Street and Edgware Road, W., manufacturer of the Oil of Sahara—Dec. 19, High Court of Justice in Bankruptcy.

ORDER MADE ON APPLICATION FOR DISCHARGE.

Clark, Charles Francis George, jun. (trading as C. F. G. Clark & Son), Dudley, wholesale chemist and druggist—discharge refused.

SCOTCH SEQUESTRATION.

Berry, A. W., Frioekheim, chemist and druggist—Dec. 2, at 12, White Hart Hotel, Arbroath.

CURES FOR DANDRUFF.

FROM a correspondence in the *British Medical Journal* we take the appended notes:—

1. The following ointment to be applied to the roots of the hair every night for a fortnight or so:—

Ung. hydrarg. nitr.	..	..	..	3j.
Vaseline	..	..	..	3vij.

The hair to be cut short and well brushed every morning.

2. The following to be used as a pomade:—

Red oxide of mercury	..	..	10 grains
Ammoniated mercury	..	..	10 "
Spermaceiti ointment	..	..	1 oz.

3. Dr. E. Mansel Sympton (Lincoln) has used the following formula with very good results, both in simple alopecia and that attended by, or perhaps rather caused by, dandruff:—

Tr. cantbaridis	..	..	..	3ss.
Ac. acct. dil.	..	..	..	3ss.
Sp. rosamarin	..	..	..	3j.
Glycerin.	..	..	..	3ss.
Aq. rosæ dulc. ad	..	..	..	3vij.

Ft. lotio.

Let this be well rubbed into the roots of the hair with a small sponge or a flannel, and let special care be taken not to wash the head; it only aggravates the evil. Good brushing and combing should be quite sufficient to keep the hair clean. This formula is slightly altered from one of the late Mr. George Naylor's.

4. Dr. W. A. Michie (Greenwich) recommends the following lotion:—

Liq. hyd. perch. (gr. iv.-5j.)	..	..	3iiss.
Liquor potassæ	..	..	5ij.
Aq. ad	..	..	3vj.

M. Ft. lotio.

To be well rubbed into scalp twice a day.

The efficacy of the remedy, which will be apparent after a few applications, is due to the yellow oxide which is thrown down. When the disease has been removed an occasional application of the lotion will prevent a recurrence, while at the same time the growth of the hair will be favoured. In those disposed to pityriasis alba the use of spirituous lotions, ointments, and oily substances Dr. Michie believes to be highly injurious, as tending to aggravate rather than remove the disease.

5. J. T. recommends citrine ointment as a certain cure, with perseverance.

[It is a noteworthy fact that nearly all the preparations recommended are of a mercurial nature. One of the most successful applications that we know of is similar. It is a pomade (to be used as such), originally prescribed by Mr. Startin, the eminent hair specialist, and first published in *THE CHEMIST AND DRUGGIST DIARY* of 1884. The formula is:—

Hydrarg. oxid. flav.	..	..	gr. x.
Hydrarg. ammoniat.	..	..	gr. iv.
Ung. camphoræ	..	..	3ss.
Ung. simpliciis	..	..	3iiss.
Ol. neroli	..	..	gtt. iij.
Otto rosæ	..	..	gtt. ij.

Fiat unguentum, s. a.

6. Dr. H. Laird Pearson (Birkenhead) is enabled from personal experience to recommend:—

Hydrarg. perchlor.	..	..	3ss.
Glycerine	..	..	3v.
Eau de Cologne	..	..	3v.
Aq. ad	..	..	3xv.

M. Ft. lotio No. 1.

Betauaphthol	..	..	3ij.
Alcohol. ethylic.	..	..	3xx.

M. Ft. lotio No. 2.

Acid. salicyl.	..	..	5ij.
Tr. benzoin co.	..	..	3iiss.
Ol. olivæ ad	..	..	3x.

M. Ft. applicatio.

Wash the head thoroughly with terebene soap, rinse well,

and dry with a rough towel; rub in some of the No. 1 lotion and dry with towel; next apply lotion No. 2, and allow it to evaporate off; finally, rub in thoroughly a small quantity of the oily application. The treatment should be carried out daily for a month, and then every alternate day for a fortnight. The dandruff disappears in a few days, and the hair becomes vigorous and supple in a remarkably short time.

The publication of these formulæ gives chemists an opportunity of introducing good specialities.—ED. C. & D.]

AN INVESTIGATION WANTED.

POTASSIUM CHLORATE AND FERROUS IODIDE IN MIXTURES.

ATTENTION is directed in "The Art of Dispensing" (page 152) to the decomposition which occurs in mixtures containing potassium chlorate and syrup of iodide of iron. Free iodine is soon observed in such mixtures owing to the interaction between the salts, the iron salt being oxidised by the chlorate with liberation of iodine. There had been at least one case of poisoning with such a mixture. In some of our American contemporaries letters are at present appearing on the subject, and one gentleman declares that he has given 2 drachms each of iodide and chlorate of potash daily for a week, and for two weeks, to his patients, without observing the slightest poisonous effect from the combination. The writer does not seem to be aware of the liberation of the iodine, but his statement as to the non-injurious character of the doses recalls the discussions on the subject which have taken place periodically in England. Mr. E. B. Taintor, of the Chicago College of Pharmacy, now makes a valuable contribution (*The Registered Pharmacist*, page 228), showing the influence of citrates in preventing the decomposition. The following mixture was made (we quote from Mr. Taintor's paper):—

Potassic citrate	..	..	162 grains
Potassic chlorate	..	..	2 "
Syrup of ferrous iodide	..	..	2 fl. oz.

No iodine was set free even after standing several weeks. The colour became considerably deeper than that of the original syrup, and it is now of a pure but dark green.

Carrying out the same idea, two other mixtures were made, as follows:—

Sodic citrate	..	..	133 grains
Potassic chlorate	..	..	2 "
Syrup of ferrous iodide	..	..	2 fl. oz.

And a third in which half the molecular weight of ammoniac citrate in grains was used, the other proportions being unchanged.

The mixture containing the sodic citrate at once became considerably darker than the first, and on standing assumed a brownish shade. The application of tests for ferric iron failed to show its presence, hence it was inferred that the change of colour was due to the formation of a double salt. No free iodine was present.

The third mixture behaved quite differently. The peculiar brownish red colour of iodine, as well as its characteristic odour, were plainly evident immediately on adding the chlorate to the mixture of syrup and ammoniac citrate. A portion of the mixture was titrated with volumetric hyposulphite, and it showed the presence of 32 per cent. of free iodine.

These experiments show that potassium citrate and sodium citrate have undoubtedly a retarding influence, but there are several points which are left doubtful, and we suggest that the subject may be further worked up by some young pharmacist. (1) It will be noticed that the quantity of potassium chlorate in the mixtures is exceptionally minute. In "The Art of Dispensing" prescription there are 2 drachms of chlorate to 6 of syrup. Mr. Taintor only has a grain per oz. Do the citrates have a retarding influence when large quantities of chlorate are used? (2) Ammonium citrate did not prevent the decomposition. This salt is rarely alkaline—indeed, it may be acid—whereas the sodium and potassium citrates are generally alkaline. From these facts the question arises, Do the citrates really prevent the reaction, or is it the free alkali which combines with the iodine as it is freed?

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

MANY CANDIDATES AND FEW SITUATIONS.—This week a competition is to take place for positions of interne pharmacists in the Seine asylums. There are two situations and nineteen candidates.

THE EIFFEL TOWER is to be closed to the public from December 1, until some time next spring. The reasons given are the necessity of some minor repairs and the difficulty of access during winter while the Exhibition buildings are pulled down.

SALT IN WINES.—Some French vintners, it seems, will salt their wine as English brewers do their beer. On being consulted by the administration the Council of Hygiene of France have given it as their opinion that salting may be allowed, provided the proportion shall not exceed 1 per 1,000.

COPPER-COLOURED VEGETABLES.—Verdigris being no longer a poison, according to the new chemical gospel, an order just issued by the prefect of police permits the use of copper utensils in preparing preserved vegetables with a view to have them green. The step has been taken in pursuance of the joint advice of both the Councils of Hygiene of France and of the Seine Department.

A DISINFECTING ACCIDENT.—On Saturday a fatal explosion took place at the Cochin Hospital in the disinfecting oven. The receiver, a large one under a shed, is heated by a series of 200 gas-burners placed underneath. On the day in question the man in charge proceeded to light the gas, when an explosion, probably due to a leak, took place, hurling iron receiver and bricks in all directions, and killing the man instantly.

THE MUNICIPAL LABORATORY still keeps in hot water. Not long since three employés were discharged for divulging, it was alleged, some investigations about a silly joke. Recently two of them, both clerks, were reinstated, and the third, a chemist-principal, was expecting a similar measure, when another scandal broke out. Two clerks were the other day arrested for embezzling money sent by mail in payment of private analyses, and have confessed their guilt. The peculations amount to several thousand francs.

PRIZE ESSAYS.—The Paris Municipal Council has proposed the following subject for public competition: "Organisation of public charities' bureaux (*bureaux de bienfaisance*) and of the medical and pharmaceutical service for the treatment of Paris indigents." The manuscripts must be left, before January 15, 1899, at the Assistance Publique office, Avenue Victoria, Paris. Foreigners may compete, but all essays must be written in French. The author of the best memoir is to receive 1,000f., and the essay will be printed. A second prize of 500f. is to be given. The usual conditions of anonymity, mottoes, &c., are to be observed. All documents relating to the subject, held by the Assistance, will be at the disposal of all competitors alike.

THE COLOUR OF FLUORINE.—New facts about fluorine were, on November 25, communicated by M. Moissan to the Academy of Sciences. He has found that platinum fluoride is decomposed in the presence of water into platinum oxide and hydrofluoric acid, and that platinum will not combine with fluorine at a temperature below 150° C. The first property explains why all attempts to prepare platinum fluoride from the oxide and hydrofluoric acid have failed. The second has enabled him, by keeping within the heat limit, to further experiment with fluorine, and to determine some of its physical properties, such as colour, specific gravity, and refracting power. They will be the object of a future memoir, when satisfactory accuracy has been attained. Suffice it to say for the present that fluorine is yellow.

BARK-WINE AND THE GROCERS.—The Indre Pharmaceutical Syndicate some time since prosecuted, before the Chateauroux correctional tribunal, a grocer who was in the habit of selling a "hygienic wine with cinchona." Defendant claimed he was not dispensing a medicinal preparation, but simply selling a common tonic drink containing but little cinchona. The court having accepted the explanation and dismissed the case, the Syndicate applied to the Bourges

Court of Appeals, but were again defeated on the same ground, namely, that the grocer's wine, not being made according to the Codex, is not a medicinal preparation. The Syndicate, thinking that with such jurisprudence any grocer may sell bark-wine freely, by merely using 49 grammes of cinchona to the litre instead of the 50 directed by the Codex, have taken steps to carry the case before the Cour de Cassation.

PHARMACEUTICAL MISSIONARIES.—K. F. Mandelin, Magister Pharmacia, of Nikolaistad, Finland, is now on a mission, sent by the Finnish Government to study foreign pharmaceutical legislation with a view to revise and entirely recast the province's pharmacy laws. Last week he was at the Paris College of Pharmacy, and being unfamiliar with spoken French was courteously received by Professor Jungfleisch, who supplied him in German with the needed information. During last July another Finnish pharmacist, M. Fogelhorn, who belongs to the same mission, visited the college library with a like purpose. M. Fogelhorn, who speaks French fluently, was somewhat surprised to hear of the natives' dissatisfaction with their own legislation, but apparently began to understand it on seeing the pile of books he had to consult to get at all the pharmacy laws, decrees, edicts, and regulations of the country.

RED INSTEAD OF WHITE PHOSPHORUS FOR MATCHES.—The General Match Company's privilege soon coming to an end by limitation, and Parliament having refused to renew it, the manufacture of matches is to become another State monopoly. The general feeling seems to be that the occasion is a good one to do away with white phosphorus altogether. Medical and pharmaceutical bodies have long since recommended the change. Statisticians keep harping on the long lists of comparatively young men and women suffering from necrosis sent from the company's workshops to the hospitals for treatment. And, lastly, the Paris Municipal Council, always alive in the public interest, have addressed a request to the Chamber of Deputies that amorphous phosphorus be by law exclusively used for the coming Government matches. The only discordant voice comes from the economists, who aver that to discard white phosphorus will prevent all exportation.

THE PHARMACY BILL.—"M. Lockroy introduced Bills respecting (1) unhealthy lodgings; (2) organisation of public health service; (3) the practice of medicine; (4) the practice of pharmacy. (Laughter.)" Such was the laconic appreciation of the Bill's reception by the reporters present at the Assembly sitting of November 19. To speak only of the proposed pharmacy legislation, M. Lockroy remarked it was the same he, as Minister of Public Instruction, introduced four years ago, at the beginning of the former legislature. Since then it had been duly considered in committee, and was ready for final action when the deputies' mandate expired. He hoped the Bill would now be taken up without further delay. But the Chamber decided otherwise, and ordered the measure to be sent back to committee, and to follow the usual routine as if it had never been before Parliament. The same course was prescribed in regard to the other Bills. At this rate, the twentieth century will see pharmacists yet under legislation, partly dating from King Jean-le-Bon.

DIGITALIN IDENTICAL WITH TANGHININ.—Dr. Arnaud, who discovered in a Madagascar plant a poisonous principle named by him tanghinin (from the botanical name), which affects the heart much like digitalis, has further compared the new chemical's properties with those of the crystallised French digitalin. Most readers of THE CHEMIST AND DRUGGIST probably know that the French call digitalin what the Germans call digitoxin, while German digitalin is something else—no matter what. Without going into the particulars of Dr. Arnaud's investigations, suffice it to say that he has found the two substances to behave so exactly alike with solvents and reagents as probably to be identical. At the same time, his experiments with Nativelle's and other French crystallised digitalins have convinced him that they really consist of an almost pure chemical principle, and should not be called digitoxin, as Schmiedeberg proposed. Such is the substance of a memoir which was read by M. Friedel at the Academy of Sciences sitting on October 28, among such loud talking that only the most prominent points of the paper could be heard.

THE POLYTECHNIC SCHOOL OF ZÜRICH.

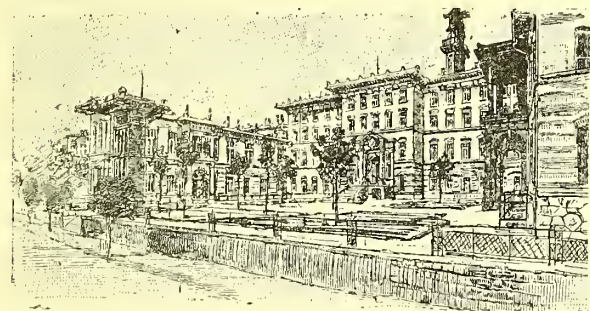
BY JOSEPH INCE AND DR. WALTER H. INCE.

ZÜRICH, with its emerald-green lake and romantic situation, hardly strikes one as a centre of student life. Trim modern houses and luxurious hotels make it attractive to innumerable visitors. The fine Bahnhofstrasse runs right through the city, which is watered on one side by the Limmat, and on the other by the Sihl, till both streams meet at a point and flow, mingled, towards the Rhine. But take the cable tramway—a curious funicular construction, worked by water-power—and you will find yourself transported as if in mid-air, till in a few minutes you reach the neighbouring height of Fluntern. That you will discover to be the seat of university and student life.

There stands the Polytechnikum, or National Polytechnic School, part of which is devoted to the University; and at a short distance in the rear the Chemical Laboratory (Chemie Gebäude), of continental fame, which has gained no small reputation for the advancement of original research.

In close proximity is the building allotted to the agricultural department and the one for physical investigations. These, together with the observatory, are all in connection with the Polytechnic School. When Bern became the seat of the federal government, Zürich was not slow to become the seat of federal education. The erection of these admirable institutes was due to the splendid liberality of the town, the canton, and united Switzerland.

Zürich, as seen in the valley, suggests nothing academic. On the steep hillside the students congregate and pursue their university career. The Polytechnikum is a massive structure, commanding one of the finest views of the lake, the valley, and the town. From the central portion of the building extend two long wings, the northern one being



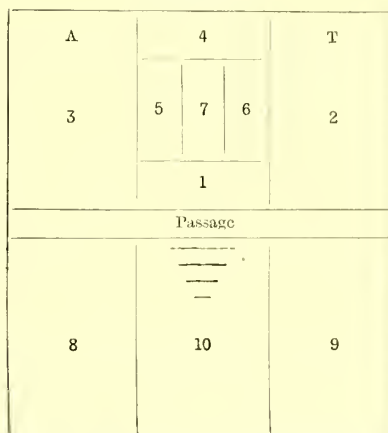
adorned with allegorical figures, and a terrace runs along the frontage. It was built under the direction of the architect, Professor Semper, between 1860 and 1864, at an expense of 100,000%. It contains various extensive collections, which, being united under one roof, form one of the most complete museums to be found in Switzerland. Mineralogy, geology, zoology, entomology, and other departments of science are in turn represented. But a distinctive character is given by the establishment of mechanico-technical and technological collections, engineering appliances, and one of building materials—the last to meet the special wants of the architect and builder. There is also an archaeological collection, including art models, statues, and plaster-casts, exhibited in a noble hall supported by lofty columns. The main entrance to the Polytechnikum conveys an idea of space, and is in keeping with the general design. Lastly, the lecture-rooms and other apartments are constructed to accommodate a large body of students—1,800 being the number who availed themselves of the school curriculum during the past year. The university has no separate home, but forms a part of the Polytechnikum. It has, however, its own professors and lecturers, its own laboratories, and is an independent institution.

The Chemical Laboratory is a building consisting of a central portion with two projecting wings, each floor being arranged on the same architectural plan. The interior divi-

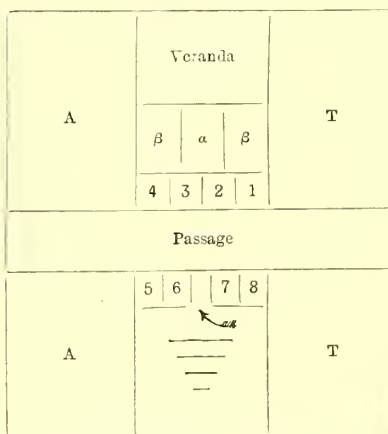
sions of the structure are in the main reproduced at each successive story. The remarkable success of this laboratory will justify the mention of certain structural details. Let us begin at the foundation.

The ground-floor is devoted to experiments conducted on a large scale, and there big distillations and similar operations are performed.

There are no separate work-benches, but work is done in common.

Ground-floor.

1. Small private lecture rooms for special courses and water analysis.
2. Technical chemistry: common room arranged for large experiments, with fume-chambers and necessary apparatus.
3. Analytical chemistry: same arrangement.
4. Steam grinders, pounders, sifters, shakers, lathes, and various mechanical appliances worked by steam.
- 5, 6. Open courtyards.
7. Chimney to the underground engine-room.
8. Store-room.
9. State "seed control."
10. Entrance.

First-floor.

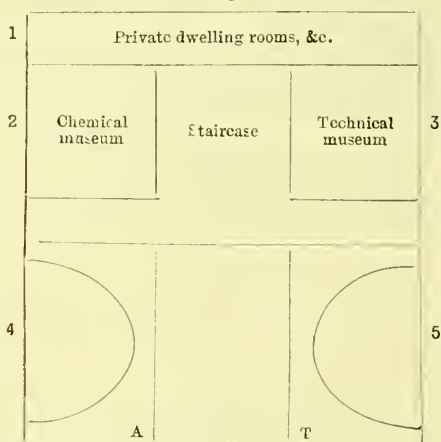
Veranda, covered, asphalted floor (for escape of noxious fumes).

1. Pharmaceutical laboratory. (Pure pharmacy as distinct from chemistry.)
2. Private laboratory. Professor Hon. Dr. H. Goldschmidt.
3. Washing-up room; private.
4. Weighing room.
5. Apparatus. (Stock.)
6. Private laboratory. Professor Dr. A. Hantzsch.
7. Private laboratory. Professor Dr. G. Lunge.
8. Apparatus. (Stock.)
- AA. Analytical laboratories.
- TT. Technical laboratories.
- ββ. Open for courtyards.

The laboratories open to the students are fitted up with private benches. The two analytical and two corresponding technical laboratories are of exactly similar dimensions.

Continuing our ascent, we reach the

Second-floor.



1. Private dwelling rooms, &c.
2. Chemical museum.
3. Technical museum.
4. Chemical lecture theatre.
5. Technical chemistry lecture theatre.

It will not escape notice that throughout one side of the building is devoted to pure or analytical chemistry, the opposite side to technical chemistry and its applications. It is this latter which attracts many of the older students to the laboratories and lectures. The upper part of the building is residential; certain rooms are appropriated to some of professors, while others are occupied by the hausmeister and domestics.

WARMING AND VENTILATION.

The whole building is ventilated by means of a huge rotating fan placed at the basement. The stream of air so produced is heated in winter by being made to pass over steam-heated radiators, cooled in summer by being driven over the same filled with cold water. The current so produced is conducted by means of a subterranean gallery to both sides of the building. In this manner both the right and left wings are kept nearly one uniform temperature throughout the year. In winter the laboratory and lecture theatres are heated by steam. By means of electrical thermometers the engineer in the basement can ascertain and regulate the temperature. He simply presses a button corresponding to the number of the room, when the exact temperature is indicated on an electric dial. If too cold he increases the steam, if too hot he shuts off the supply. The engineer asserts that the fees received from the students do not cover the expense connected with the generation of the steam.

THE LABORATORY OF PHARMACY

is abundantly supplied with all ordinary apparatus, besides special contrivances adapted to technical pharmaceutical operations. The evaporating pans are uniformly worked by steam, as also the digestors which are designed for maceration in hot alcohol. Hydraulic presses are provided for expressed juices. There are revolving stirrers, and an ingenious device for shaking bottles, both driven by water power. Steam is utilised in pounding, grinding, cutting, and sifting. Steam, in fact, as far as may be possible, supplies the place of manual labour.

The Chemical Technical School is under the general direction of Professor Dr. G. Lunge. His theoretical course lasts four semesters, or two academical years, each of ten months' duration. The student must have passed his examination as an assistant before entering on these studies.

THE PHARMACY CURRICULUM.

FIRST YEAR'S COURSE.

Lectures.

	Hrs. per Week.
Analytical chemistry	2
Organic chemistry	6
Experimental physics	4

Practical Work.

	Hrs. per Week.
Chemical analysis	12
Special botany	4
Microscopic work adapted to pharmacy	2

Revision Classes.

Experimental physics	1
Organic chemistry	1

Included in the Curriculum, but not Compulsory.

Pharmaceutical zoology	2
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SECOND YEAR'S COURSE.

Lectures.

Pharmaceutical chemistry	4
High organic chemistry, as benzole derivatives (1888-9)	2

Practical Work.

Practical pharmaceutical chemistry	12
Practical materia medica	3
Revision class	1

Included in the Curriculum, but not Compulsory.

Foods, alimentation	2
Preparation of chemical products	2
Pharmaceutical history [Old and new methods contrasted]	2
Ethereal oils and camphors	2

Next follows the State examination and the end of the pharmacist's training.

CHEMISTRY.

The laboratories are open from 8 A.M. to 6 P.M. The lectures are delivered at intervals throughout the day, and are distinctive in this respect—that, outside the special pharmaceutical training proper, general chemical and physical theories are only touched upon, without minute explanation. The system of training is that of a school and not of a university. A certain percentage of attendance on lectures is indispensable, and certain hours of practical work must be observed. In case of lax attention or irregularity the parents are communicated with upon the subject.

Omitting details respecting apparatus and appliances, which are common to all well-appointed laboratories, some special arrangements may be described. Each separate work-bench on the first-floor is supplied with three gas-jets, three water-taps, and one vacuum tap, one wash-up basin, three drawers, three cupboards, and six shelves, on which are placed thirty reagent bottles with burnt enamelled labels. These are for individual student's use. Two large steam baths with about twenty openings, capable of being covered so as to form evaporating pans, are for general use. Every two benches are furnished with a large fume chamber.

There are two large steam-drying cupboards fitted with partitions, and conveniently arranged hot-air baths, steam-filter driers, hydraulic presses, and water-baths at constant level. In both the analytical and technological departments are special rooms for "elementary organic analysis," fitted with gasometers of oxygen and air, and furnaces of the latest patterns.

The laboratories on the ground-floor, which are for use in common, are furnished with apparatus for ether and alcohol distillation; steam taps for steam distillation; compressed air and vacuum taps, and other expensive apparatus required for technical and other purposes.

The technical department embraces a wide range of subjects—dyeing, the chemistry of aniline colours and their industrial appliances; and direct attention is paid to photography as a science. A metallurgical laboratory is established for the assay of minerals. There is a room, called appropriately "Canonen Zimmer," for dangerous experiments with sealed tubes; and also a laboratory on the ground-floor exclusively devoted to the investigation of explosive substances, such as dynamite.

Owing to the liberality of the Swiss Government which has been already noticed, the Polytechnikum and its affiliated institutes are largely subsidised. In consequence, all educational fees are infinitely less than the corresponding ones in England. Lectures cost 1*l.* 4*s.* for one hour a day for a

period of one semester, or five months. Fee for whole time in chemical laboratory, for the same period, 5*l*. Apparatus, with few exceptions, is lent on deposit; when returned undamaged the money is refunded; when broken, it has to be paid for at cost price. The use of steam, gas, and specially expensive apparatus is included in the laboratory fee.

Add to this the expense of the journey out and the cost of board and lodging, which is higher than in smaller German cities. Zürich, though Swiss, is an essentially German town; the lectures are delivered and the whole instruction communicated in that language. This forms the real drawback to our countrymen, who are frequently familiar only with their mother tongue.

PHYSICS AND BOTANY.

Courses of both are carried on in the University Polytechnic building. Physics are purely theoretical, and practical work is not required. Connected with the botanical course are excursions principally devoted to Alpine flora, and not wholly unconnected with Munich beer. A new Physical Institute is now in construction: some of its rooms are built entirely without iron, for magnetic experiments. This Institute is mainly for the benefit of physicists and electro-technologists.

THE UNIVERSITY.

Although the University and Polytechnikum flourish under the same roof, they are distinct institutes. To enter the University it is necessary for a student to have passed his eighteenth year, and to have undergone a higher examination (the Major matriculation) than that requisite for entrance into the Polytechnikum.

The summer session begins in April and the winter session in October. It contains four faculties, and the gymnasium is preparatory to its courses. The industrial school, on the other hand, is preparatory to the Polytechnikum. It is empowered to grant degrees, whereas the Polytechnikum can only award diplomas. Moreover, the time required for a degree is longer than that for a diploma. The University student is a free lance, and is under no absolute necessity to attend lectures or to conform to stringent regulations. The true name of the Polytechnic pupils is *Schüler* (school-boys), and as such they are officially described. Their recognised place of study is the Cantonal Polytechnic School. University men are *Studenten*, whom we should call undergraduates.

But if the University has its own separate laboratories and chemical professor, it has also its own numbers, 500 as compared with 1,800. One taking up theology, law, or medicine must obtain a University degree; architects, engineers, technical and analytical chemists, civil engineers, foresters, scientific agriculturists, Government middle-class school teachers, and pharmacists take the diploma. The situation will be best understood by the now familiar terms of the classical and modern sides of education.

LECTURERS ON CERTAIN SUBJECTS.

Chemical technology. Professor Dr. G. Lunge.
Pure chemistry. Professor Dr. A. Hantzsch.
Analytical chemistry. Professor Hon. Dr. E. P. Treadwell.
Pharmaceutical chemistry and pharmacy. Professor Ed. Schür.

Physics. Professor Dr. H. Schneebeli.

Botany. Professor Dr. C. Schröter.

Such is a brief sketch of this celebrated school at Zürich, in which are included in this notice the Polytechnikum, the Chemical Laboratory, and the Physical Institute. Enough, it is hoped, has been said, to show its general design and mode of work, as well as to distinguish it from the University. Its appointments are on a princely scale, and every modern appliance and improvement has been introduced. New apparatus found to be effective is immediately admitted, there being no financial difficulties with which to contend. The school has the advantage of ample State support and that of Cantonal Switzerland. Its success, obviously, is also due to its eminent professors and the methods of teaching which they adopt. Many nationalities are represented within its walls, a circumstance which need not excite wonder, for a residence in a country other than one's own is in itself an education. Besides, the Alps, the glacier, and the lake have imperishable attractions.

35 Plattenstrasse, Fluntern, August, 1889.

RECENT RECOMMENDATIONS.

It is very difficult to mix watery solutions with vaseline, but, according to *Rep. de Pharm.*, a little castor oil added to it makes mixing easy.

CATTLE TONIC, OR FEEDING POWDER.—Saltpetre, 5 parts; black antimony, 17 parts; Epsom salts, 6 parts; Glauber's salts, 6 parts. Mix. Dose: a heaped up tablespoonful.

A SHAVING PASTE is spoken well of by the *Seif. Ztg.*, which is made by melting together 45 parts of spermaceti, 45 parts of almond or other non-drying oil, and 350 parts of soft soap. Stir the melted mixture constantly until it cools, then add any suitable perfume.

BEEHAG'S MENTHOL SNUFF, a splendid remedy for catarrh and other cephalic affections, is proposed to be modified by Dieterich, so that the formula may be: Menthol, 1; boric acid, 10; ground coffee, 10. Mix. This may be made a stock powder.

A GOOD MILK-PRODUCING POWDER for cows is, according to Maerker (*Ph. Ztg.*), made by mixing together equal parts of powdered calamus root, white bolc, common salt, fennel, and anise. A heaped-up tablespoonful of this is to be given three times daily in gruel drink.

UNG. POTASSII IODIDI, which remains white, can, according to Dieterich, be made by mixing in the regulation manner 10 parts of the iodide, 1 part of white soap, 9 parts of water, and 90 of white vaseline. These are not the B.P. proportions, but for private practice they can be modified to suit.

COPAIBA PILLS are generally as hard as a brick, and as insoluble. Dieterich states (*Ph. Centr.*) that the following 25 per cent. mass diffuses readily in warm water:—Copaiba, 10; glycerine, 2; mix and add a mixture of powdered sugar, 10; calcined magnesia, 10, and liquorice, 8. All quantities are to be taken by weight.

FOR CREOSOTE PILLS it is well known that magnesia and wax are undesirable excipients. The following gives a 25-per-cent. mass, which is said (*Ph. Centr.*) to be all that is desired:—Creosote, 10; glycerine, 2; mix in a mortar and add finely-powdered liquorice juice, 10; pound well and make a mass with powdered liquorice root, 18 parts.

TOOTH-POWDER.—Polasek, a Hungarian authority, is responsible for the following formula for a hygienic powder. We give the quantities in British weights:—

Precipitated chalk	3 lbs.
Carbonate of magnesia	1½ oz.
Powdered white soap	1 lb.
„ orris	5 oz.
Thymol (dissolved in spirit)	30 grains
Oil of peppermint	100 drops
„ cloves	50 „
„ lemon	50 „
„ eucalyptus	50 „

Mix.

NAPHTHOL MIXTURES for internal use are being prescribed in Paris just now, and to meet the difficulty in making them, Mainiel, a hospital interne, suggests to make a 10-per-cent. solution of the naphthol in almond oil, then emulsifying this oil in the following manner:—

	Grammes.
Naphtholated oil	20
Gum arabic	20
Simple syrup	30
Orange-flower water	20
Distilled water	60

Make a mucilage of the gum with twice its weight of water; add the oil to this in very small portions, so that each may be thoroughly emulsified; then add the other liquids.

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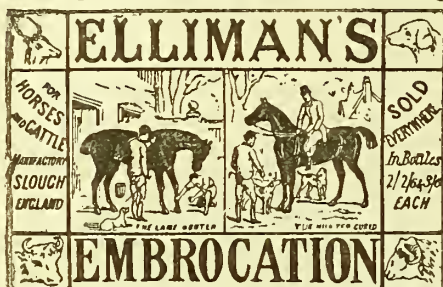
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EDITORIAL NOTES.

GRADUATES IN PHARMACY.

THE part of Professor Fraser's address at Edinburgh last week which will be regarded as of greatest importance was that in which he proposed that universities should formulate courses of instruction adapted to the requirements of pharmacy, and confer upon pharmaceutical students diplomas in pharmacy which would entitle the holders to registration under the Pharmacy Act. The proposal is, of course, contingent upon the passing of a Curriculum Bill. That, doubtless, lessens its importance, for the Curriculum Bill is a somewhat shadowy entity, although Professor Fraser seems to have higher hopes of its success than we have; but, leaving the Bill out of count altogether, the proposal is significant as being the first practical response which has been made to the appeals of Mr. Schacht and those who are with him in the higher education movement. It is all well enough to say that pharmacy is an integral part of the medical profession, but, then, the medical profession has persistently ignored the association. At this juncture Professor Fraser steps in and proposes that pharmaceutical students should take advantage of the medical classes of the universities as far as they are suitable, and that the universities should make a return in the shape of a diploma. The proposal will cause a flutter in the dove-cots.

We are inclined to treat the proposal seriously, although it was made in the course of an inaugural address. And for these reasons:—Professor Fraser is a man who means what he says; he speaks very rarely outside his academical chair; is extremely reserved, and a little unapproachable; has a

scrupulous regard for accuracy, and his intimate relation with the Edinburgh University as Dean of the Medical Faculty must act as a bridle to his tongue in such matters as a proposed new diploma. We conclude, therefore, that he anticipates a future in which pharmaceutical students will have a more intimate relation with him as a professor than they have hitherto had. There is a section—an extremely small section—of pharmacists to whom this news will be very welcome. They imagine that the best thing in the world for pharmacy is to give pharmaceutical chemists a degree, so that they may call themselves “Dr.” This is not Professor Fraser’s idea. What he would give is a diploma. There is a world of difference between a diploma and degrees. The Edinburgh University is most liberal in regard to both, and always shows itself equal to any new educational movement which the times may produce. Thus, within recent years, it has established a degree in agriculture, and to meet the requirements of schoolmasters, it has made a department in arts for them, and students in that department are granted a diploma with the style *Literate in Arts*. It is to this latter class that the pharmaceutical diploma would, we presume, belong. The successful student would be a diplomate, not a graduate, in pharmacy; he would not have the gown or the cap, but the University would receive his fees, countenance his attendance, and, with the aid of the Pharmaceutical Society’s deputies, would examine him.

This is a very pretty scheme for the students of university towns, and for the university professors. But is it good enough for others? We must remember that the Pharmacy Acts would have to be amended in a new direction before it could be carried out, and, as this might affect the Pharmaceutical Society’s treasury, we presume that it would not countenance it without being assured of a sufficient equivalent for its lost examination fees.

FREE COMPETITION IN BLEACHING-POWDER.

WE have already announced that at the end of the present year the Bleach Association will cease to exist. The output of bleaching-powder, a chemical which has often (though, we think, wrongly) been described as the barometer by which the prosperity of the entire chemical trade could be measured, will thus again be handed over to unrestricted competition, and the consequences are already seen in the sudden decline in the value of the material, which is now being freely offered for sale over the whole of 1890 at 5*l.* per ton, while a few weeks ago its price stood quite 40 per cent. above that point. The combination of bleaching-powder manufacturers was launched, after several previous ineffective attempts to arrive at an understanding, in May 1883—provisionally, we think, for the period of eighteen months. Prior to its inauguration years of fierce competition had reduced the price of bleaching-powder from the normal rate of between 7*l.* and 7*l.* 10*s.* to 4*l.* per ton, a figure at which even the best-equipped works could not manufacture with a profit. The result of this heedless rivalry was to bring even powerful firms within approachable distance of ruin, while the smaller manufacturers were mostly compelled to cease working altogether, until the number of works on the Tyne was reduced from about twenty-five to nine or ten, though it must be said that these few were capable of turning out almost as much bleach as the previous aggregate of the larger number. The output of soda crystals had long been a loss to the Tyne manufacturers, who, with their more complex system of manufacture, could not compete successfully in this branch with the ammonia soda works. Bleaching-powder, which is not a by-product of the ammonia process,

became therefore their sheet-anchor, and nothing but combination and regulation of the sale of this article could prevent them from collapsing altogether. The satisfaction was therefore general when the Bleach Association became a reality, for although its members had to curtail their output of bleach by about 10 per cent.—a restriction subsequently increased to 20 per cent.—the price rose soon after the conclusion of the convention from 4*l.* to 6*l.*, and has since ranged generally between 7*l.* and 8*l.*, with one or two spurts up to 9*l.* during cholera years. It is said that from the first the Association did not work altogether smoothly, but, however this may be, the ring was renewed in the autumn of 1884, and has since then continued uninterrupted until now. The bleaching-powder makers’ combination has been one of the largest, and, to judge from appearances, one of the most successful of the many rings which have sprung into life during the last decade, and it is at least questionable whether, taken as a whole, their trade will benefit by the reopening of the system of free competition. That the consumption of bleaching-powder in this country has not decreased during the reign of the convention is pretty certain, though no figures are obtainable to prove it. But our export statistics prove that during the five years from 1883 to 1887 the shipments of bleaching-powder to foreign countries were much larger than in any previous quinquennium, while the values were also far greater, both relatively and actually, as the following figures show:—

1873-7, 4,039,000 cwt.; 1878-82, 6,890,000 cwt.; 1883-7, 7,848,000 cwt.
1873-7, 1,724,000*l.*; 1878-82, 1,732,000*l.*; 1883-7, 2,745,000*l.*

Had there been no association, it may safely be calculated that the average value of bleach during the last five years would not have been much more than 4*l.* per ton, which would have given an aggregate of 1,570,000*l.* for our exports during that period; while, thanks mainly to their convention, the manufacturers have actually succeeded in taking 2,745,000*l.* out of the pockets of their foreign customers for the same quantity of goods. They have thus been able to divide nearly 1,200,000*l.* among themselves as the luscious reward of a very moderate amount of self-control, and that being the case, their unanimous decision to break up their association bears the look either of an extraordinary confidence in the future of their business, or of a striking want of common sense. That the exports of bleaching-powder should have continued to grow as they have done is a remarkable evidence of the strength of the British as compared with the foreign soda industry. Our largest foreign customers are Germany and the United States. In both countries there is an enormous import duty on bleach—in Germany about 25 per cent., and in the States much more than that. Yet both these countries remain almost dependent upon England for their requirements, in spite of the endeavours of their Governments to nurse the native industry. With regard to the future of the article, it is difficult to be sanguine. The best makers—who complain that under the combination system the inferior brands were unduly favoured at the expense of their own makes—will no doubt be able to hold their own for a while, though if they make no profit on their bleach one would like to ask how they are going to find a living?

But there are other dangers ahead which threaten to revolutionise the whole alkali industry, and should the Weldon-Péchiney process for the manufacture of chlorine from magnesium chloride be carried out with practical success, it is hard to think of anything that will prevent the utter extinction of the Leblanc alkali works as now conducted.

CAMPHOR STILL RISING.

THE advance in the value of camphor has now reached a point which we think has only once been surpassed within the memory of living druggists, who are proverbial for longevity. That occasion, according to tradition, was about thirty years ago, when an outside speculator bought up almost the whole stock of raw camphor and drove up the price to something like 15*l.* per cwt. We have now arrived at exactly half that figure, small quantities of Japan camphor having changed hands this week at 150*s.* per cwt. On a previous occasion we pointed out that the advance in the refined article was keeping pace pretty evenly with that of the raw drug, but the latter now seems to have outrun the former by a considerable distance. Early this week, when 125*s.* c.i.f. terms had been paid for raw Japan camphor for arrival, the three English refiners had a conference on 'Change, and agreed to a rise of another penny per lb. on the refined article, bringing up the price for bells to 1*s.* 7*d.* per lb., with the important condition that there should not be the usual $\frac{1}{2}$ *d.* per lb. reduction for large orders, thereby accentuating the strength of the position. One of the refiners strongly urged a higher advance than was actually adopted, but ultimately deferred to the wishes of his competitors. As a matter of fact, the refined article, if the proportion hitherto observed has been a fair one, ought now to be close upon 2*s.* per lb., and if the present scarcity should continue for some time it seems not unlikely that that point may ere long be reached. A very important feature in the position is that the foreign refiners, who usually are able to offer a little lower than the English manufacturers even in this country, are now altogether out of the market. In fact, we understand that some of the largest German druggists have lately been placing important contracts with the English refiners at the full market prices, being unable to supply their requirements in their own country.

One or two brokers are still holding out prospects of impending large arrivals of raw camphor from Japan, but, so far as we can gather, it is more likely that the present scarcity will continue for some time at least; and, although we do not say that the actual quotations are certain to be fully maintained, we must make up our minds that our supplies of the raw drug will be much smaller in future than they have been in the past. According to our information, the camphor-trees owned by private proprietors in the southern islands of Japan have been to a large extent exterminated, and by far the greater number of trees still existing are owned by the Government, to whom even a very high camphor price could scarcely be an inducement to destroy the valuable laurels. It is said that about 55 cwt. of wood are required to produce 1 cwt. of gum with the antiquated native stills which are in use, and the cost of the gum to the collectors stands (or did a couple of years ago) at from 40*s.* to 45*s.* per cwt. The extraordinary prices now obtainable may cause a temporary increase of the output, but not by any means to the same extent as they would have done some years ago.

ALKALI AND ELECTRICITY.

THOSE who are best acquainted with the condition of the coalfields of Great Britain are fairly agreed that towards the end of next century the inhabitants of the country will be feeling the hardships of a deficient supply. Most likely long before that happens such advances will have been made in transforming the forces of nature—the wind, tides, and running streams—into electromotive force that coal may to

a large extent be dispensed with. What coal can do electricity is capable of. So it is generally supposed; but we have to make many big advances before that is the case. At present, for example, we are almost entirely dependent upon coal for our supply of electric force, and that supply is only obtained at the cost of a fearful loss of the energy which is stored up in coal. We think it good to have a pretty light and a pure atmosphere, to move carriages without the puffing noise of the steam-engine, but as long as these are secured with electricity extracted from coal, the world is a loser rather than a gainer. We have lost much of the coal's energy in burning it; part of what remains is lost in converting water into steam; some of the steam's energy is lost in driving the steam-engine; and the latter again dissipates some of its energy in working the Gramme machine. In fact, we get scarcely 10 per cent. of the energy of coal when we convert it into electricity. Evidently, therefore, the divorce of the two best friends of man is merely a question of time.

It is the duty of science to anticipate the wants of humanity. On that principle chemical science must ere long begin to shape the alkali process of the future. The world cannot get on without alkali. The processes by which that useful agent is at present produced depend greatly upon coal. In the Leblanc process it supplies the carbon and the heat necessary to convert the salt into sodium carbonate. The ammonio-soda process is somewhat less dependent upon coal, and would probably get on well enough without it, provided electricity were able to supply heat at a reasonable figure; but that is highly problematical. It would be much more economical to use the electric force for direct chemical decomposition. This is an issue which British chemists of the next century must face, unless the great chemical industries of this country are transferred to some other region where the coal industry is still in its infancy.

Dr. Hempel may not have had these contingencies in view when he commenced the series of experiments of which he has recently given an account in *Berichte*. The object of these experiments was to show that the simultaneous production of sodium carbonate and chlorine gas from common salt by the intervention of the electric current is possible. The results are interesting from a chemical point of view, and, as *Nature* says, they may bear fruit technically. The conditions of the experiments may be briefly described. The solution of common salt was placed in a special form of electrolytic cell, through which a current of carbonic acid gas could be passed. The circular electrodes were of iron and carbon, with a sheet of asbestos paper between them. To the cell was attached an arrangement for supplying it with common salt as the decomposition proceeded, and another for carrying off the chlorine as it was formed. It was found that with these and other minor arrangements the cell could be kept going continuously for weeks, during which crystals of pure sodium carbonate ($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$) were deposited, and chlorine gas, containing but a small admixture of other gases, was given off. It is supposed that the first effect of the electric current is to decompose the sodium chloride into its elements; the sodium reacts with water to form sodium hydrate; and this is converted into carbonate by the carbonic acid gas. In the experiments 645 grammes of chlorine and 259.8 grammes of sodium carbonate per horse-power of 680 volt-amperes were produced per hour, which may be considered respectable quantities, sufficient, at all events, to warrant continued experimentation. The noteworthy point about the process, apart from its foreshadowing the future of the alkali industry, is the simultaneous production of alkali and chlorine. This would indeed be a great advance. We must have chlorine pro-

ducts; they are as necessary in textile industries as alkali itself. But we do not gather from Dr. Hempel's experiments how the electrolytic hydrogen was got rid of. The quantities of chlorine and sodium carbonate which he obtained are substantially in the theoretical proportions, yet it is reasonable to suppose that nascent hydrogen and nascent chlorine could not as such long exist beside each other. On the manufacturing scale this would prove a serious obstacle to the process, and, although its adoption lies in the dim future, the assurance of perfect safety in regard to the gaseous elements must be made its distinctive feature.

THE DECADENCE OF LAC-DYE.

A CURIOUS illustration of the extent to which some classes of produce have depreciated in consequence of displacement by cheaper or more effective articles was furnished by the case heard at the City of London Court about ten days ago, in which one of the principal private wharfingers of our port was sued for the "wrongful conversion" of a few cases of lac-dye. That dye-stuff, which has been almost entirely driven out of use by aniline dyes, though it is still, we believe, employed to a very limited extent for the dyeing of some special classes of woollen goods, constituted at one time a very valuable article of trade, and was annually imported from British India to the extent of many thousands of chests, which were used by silk and wool dyers. About thirty-five years ago—at the time of the Indian Mutiny—its value rose to about 3s. or 3s. 6d. per lb. for the best brands of European manufacture, and even for several years subsequently its average price was about double that of the best shellac. Lac-dye, in fact, was then the principal article of output of what are now the shellac factories, and the latter article was looked upon as quite a small article of manufacture. The lac-dyes made at the factories owned by Europeans—notably the brands "D.T." and "B. Mirzapore"—bore about the same relative value to the "native" lac dyes as do the finest brands of orange shellac to the common native lacs of the present day. At that time lac-dye filled the place of a cheap substitute for cochineal, but gradually the era of aniline dyes arose, and almost every kind of dye, of vegetable or animal origin, felt the stress of the competition of the cheaper synthetic colours. Indigo, which fills a unique place; cutch and turmeric, owing to the cheapness with which they can be produced; and one or two other dyes have more or less withstood the shock; but for these few, which remain comparatively intact, dozens have gone to the wall altogether, or are greatly shorn of their importance; witness such articles as cochineal, garancine, madder, and safflower. Lac-dye has almost entirely disappeared from commerce, and at present is scarcely manufactured at all. Sticklac is the mother product of both shellac and lac-dye. During the period when the latter article was the leading one, the colouring matter of sticklac was dissolved out at the factories by means of an alkaline solution, and then precipitated with alum, the resultant product being the lac-dye of commerce. Now the sticklac is melted and strained, and the resin obtained from it formed into the flat cakes or brittle scales which we know as button lac, garnet lac, and shellac. When the depreciation of the article commenced in earnest, and it became clear that there was no hope that it would ever regain its position, many owners of lac-dye stored in the London warehouses, some of whom had obtained considerable advances from banks upon the supposed valuable commodity, endeavoured to shirk their responsibility by simply abandoning the goods. Gradually the wharfingers began to grow tired of keeping an article the accumulated

rent for which had greatly outgrown its value, and a few years ago the defendant in the suit to which we have alluded is said to have destroyed all the lac-dye which he could find in his warehouse. The consequence of this action was a lawsuit by some of the holders, and rumour has it that the proprietors of Butler's Wharf were made to bleed pretty freely by certain other holders of warrants, who would probably never have put in an appearance had it not been that the process of destroying the lac would appear to have been of doubtful legality. Lac-dye is by this time, we may presume, a somewhat unpleasant sound in Mr. Lafone's ears. His counsel pathetically complained the other day that his client had lost 6,000% over the article, and we are certain that if Mr. Lafone cared to impart his reminiscences of the article, they would form an interesting chapter in the commercial history of Mincing Lane. By this time, however, the stock of lac-dye in London is probably within sight of extinction, the last great massacre of the unfortunate article having occurred in October of last year, when 740 packages were sold by public auction at rather less than one shilling per case for the best brands, and about one seventh of a penny per bag for the ordinary grades.

COMMENTARY.

THE unqualified seller continues to occupy a considerable share of pharmaceutical attention. We have been obliged to limit the correspondence on this subject, especially as very little new on either side is urged. The subscriptions so far received or promised are as follows:—

THE CHEMIST AND DRUG- GIST	£	s.	d.	J. H. Read, 818 Holloway	£	s.	d.
Evans, Sons & Co., Liver- pool	10	0	0	Road	1	1	0
Idris & Co., London	5	5	0	E. Tebbutt, 316 High Road, Bromesbury	1	1	0
M. E. Foster, 50 Bishops- gate	2	0	0	Townson & Mereer, Lon- don	1	1	0
H. T. Hairsine, 47 Hay- market	2	2	0	J. Wheelton, 241 Stockport Road, Manchester	1	1	0
Liverpool Chemists' Asso- ciation	2	2	0	C. Wheeler, 143 Haekney Road	1	1	0
R. Needham, Stalybridge	2	2	0	A. Greaves & Son, Iron- ville, Alfreton	0	10	6
A. P. Barnard, High Road, Stamford Hill	1	1	0	A. R. Keith, Criterion Buildings, Upper Hol- loway	0	10	6
Per A. P. Barnard:—				A. Kinnimont, Glasgow	0	10	6
C. Winter	1	1	0	S. Lawrence, Oban	0	10	6
M. C. Thompson	0	10	0	An Unqualified Assistant (178/50)	0	10	0
— Maude	0	10	6	W. Chapman, 410 Wards- worth Road	0	10	0
— Morris	0	5	0	Curtis & Co., 48 Baker Street, W.	0	10	0
— Bartlett	0	2	6	J. Williams, Aldershot	0	10	0
A. G. Chamberlain, Rugby	1	1	0	C. C. Bell, Epworth	0	5	0
S. J. Coley, Stroud	1	1	0	H. E. Ibbitt, Sheffield	0	5	0
A. Greaves & Son, Chester- field	1	1	0	Horner & Sons, London	1	1	0
G. Hatfield, East India Road	1	1	0				

We understand that, in addition, some 10% or 12% more has been promised in Liverpool. This is not enough to fight with, and more promises or cheques may be sent either to Mr. M. E. Foster, 50 Bishopsgate Street Within, or to ourselves. We believe that notice of appeal will be given, and we have also reason to believe that an application will be made to the Pharmaceutical Council to consent to an argument being taken in the High Court, on the understanding that each side shall pay its own expenses, and that no further appeal shall be made by either party. The Society's solicitor promised in the County Court to give every facility for obtaining the opinion of the High Court in this matter, and this will be the most practical way of keeping his promise.

REFERRING to our notes on the new Dutch Pharmacopœia, one of the committee writes to us concerning the test for ether, and points out that the reaction with mercuric chloride and baryta water is for the purpose of indicating whether the ether has been prepared or not from methylated spirit. The same test is also used for rectified spirit; and in testing sweet spirit of nitre the same object is achieved by the use of the iodine and ammonia test, which we have already described. These tests are practically unknown in this country, and we understand that they have been devised by Professor F. W. Gunning, of Amsterdam, in his capacity of adviser to the Dutch Excise, who has been engaged for nearly a quarter of a century in testing spirits for wood naphtha.

MR. JOHN MOSS, referring to our editorial note of last week on "Pharmacopœia Corrections," reminds us that a list of the corrections made in the last reprint of the British Pharmacopœia can be obtained *gratis* by sending a stamped and addressed envelope to the Registrar of the Medical Council, 299 Oxford Street, W., or to Messrs. Spottiswoode & Co., New Street Square, E.C. Although this list of corrections does not include the one upon which our note of last week was based, it is right to state that it is of a very complete character, and contains so many corrections of importance that all chemists and druggists should secure a copy of it and make the necessary alterations in their pharmacopœias. We may add that the Pharmacopœia Committee compiled the list, and referred to it in their report to the General Medical Council last autumn.

THE undercurrent of suspicion in public opinion respecting the medical profession in its collective capacity has found emphatic expression among the subscribers to the City of London Hospital for Diseases of the Chest. The secretary of that institution gave currency, nearly a year ago, to charges against its medical staff, to the effect that an increasing tendency was manifested among them "to make the hospital less a hospital for consumption, for the treatment of poor patients recommended by subscribers, than a school for the education of doctors." In March of this year a committee appointed by the Council investigated the charges, and the result of their inquiry was that the Council passed a resolution severely censuring their secretary. But, obviously, this was not sufficient. That, at least, was the opinion of the medical staff, who, in a body, claimed further and fuller investigation, and at the same time tendered their resignations. At the inquiry the secretary submitted two definite cases, in which, according to him, unjustifiable experiments had been made upon patients. The surgeons implicated made it perfectly clear that in those cases the best had been done for the patients that could have been done. The secretary was therefore called upon to resign, and the medical staff consented to continue their services. This occurred on July 8. But outside feeling was not quite satisfied, and, consequently, at a special meeting of governors, convened in September for the purpose of getting authority to sell out some of the funds, an amendment was moved declining to authorise the sale asked for until the governors should be satisfied as to the justice of the action which the Council had taken with regard to the secretary. This amendment was ruled out of order, but at a subsequent meeting of the governors, one with a substantially similar effect was carried by a vote of 57 to 22. The Council refused to be guided by this adverse vote, and consequently a demand for a special Court of Governors was made, and a carefully drawn up statement of all the facts was sent round by the

Council. There are about 1,200 governors, and some 300 of these attended the meeting, which was held on Thursday afternoon at the Cannon Street Hotel. Representatives of the press were also invited. The meeting was a very excited one, and Sir James Whitehead, who was called to the chair as a neutral party, proved to be a somewhat irascible peace-maker. After several altercations between himself and some of his audience he got to work, however, and suggested a conference between representatives of the dissentients and the Council. This was the ultimate result of the meeting; but before it could be adopted the friends of the Council insisted on a vote of confidence. They were in large majority, and Lord Derby, who moved the vote, made one of his peculiarly wise and common-sense little speeches, irritating nobody. The soothing influence of his oratory was somewhat counteracted by the peculiar selection of Mr. Jonathan Hutchinson, consulting surgeon, a prominent representative of the persons directly implicated, to second the motion. The storm is now probably at an end, but it is to be hoped that it will have taught the great men of medicine that, notwithstanding their lofty objections to be criticised by "persons who are quite incompetent to form an opinion," the subscribers to hospitals intend to reserve to themselves their right to exercise such criticism.

THE second part of Mr. Frederick Janson Hanbury's "Illustrated Monograph on the British Hieracia" has just appeared. It deals with *Hieracium pratense*, *H. Auricula*, *H. dubium*, *H. alpinum*, and *H. holosericeum*. Very exact details are given of the localities where these are to be found, and the plates representing the plants are as perfect, both in drawing and colouring, as anything ever produced in botanical works. The monograph is published by the author at Plough Court, Lombard Street, and is sold at 4s. per part with uncoloured plates, or 6s. with coloured plates.

Obituary.

DAVENPORT.—On November 20, Mr. Edward Davenport, pharmaceutical chemist, St. Albans. Aged 64.

HARRISON.—On November 24, at Spring Terrace, North Shields, Henry Harrison, chemist and druggist, aged 73. Mr. Harrison for many years carried on his business as a chemist in Duke Street, but latterly became a bonded store merchant. He was highly respected.

GUAIACUM AND OZONE.—Ozone forms not only a blue oxidation product by its action on guaiacum, but also a whole series of coloured products. It has no action on perfectly dry guaiacum. If a small piece of iodine is placed on damp guaiacum paper, a blue ring forms all round, which is strengthened by being moistened with water. This reaction is extremely delicate.

THANKS!—In quoting several pages from our Educational number regarding the system in vogue in Great Britain for the education of pharmacists, the *Western Druggist* says:—"The system will, no doubt, appear as somewhat cumbersome to American pharmacists, but it must be remembered that this is only one of the necessities associated with a more complicated government and the more thorough organisation possible in a thickly-populated and old country. Besides, the difficulties that confront legislation in America, because of the well-nigh impossibility to obtain national legislation on any matter pertaining to the health or protection of the community against deception in medicine, are so much greater than in England, where Parliament may probably be reached as easily as any one of the forty odd general assemblies of the various United States, where all pharmaceutical and medical legislation so far had to be enacted."

A GENERAL VIEW OF SCIENCE.

At the meeting of the Newcastle-on-Tyne Chemists' Assistants' and Apprentices' Association, held on Wednesday evening, Mr. George Weddell, the honorary president, gave a scholarly address, which he entitled, "A General View of Science." The announcement regarding the address had brought nearly every member of the association to the meeting, and throughout it was listened to with close attention, and at the conclusion a vote of thanks was unanimously accorded to Mr. Weddell, on the motion of the chairman, Mr. John Pike, seconded by Mr. Clague. Below we print some of the choicest passages from the address.

* *

Head knowledge is of no value as an element of training, unless it has been acquired by some practical experience or experiment. Two hours spent in the laboratory with blow-pipe, test-tube, and burette, are worth twenty hours spent with books alone at the fireside; for the great laws of nature will never take deep root in your minds unless your eyes have seen and your hands worked out their practical demonstration. "Bentley" must lead you into the green fields, "Attfield" into the laboratory, if you are to learn the secrets they possess. Practice and theory must go hand-in-hand in search of truth.

* *

What is science? It is knowledge set in order—the knowledge or understanding of the universe of nature. This is a vast field of study, impossible for any one student to travel carefully over. The work must be divided into many classes, each of which may occupy a lifetime. Yet at the beginning students should fix their minds upon the entire universe of sun, moon, stars, and earth, with all that is thereon, as the field of science, and let that science be in their minds, undivided as yet into its various branches of chemistry, biology, and so on. The first thing we find necessary in commencing our study is to measure distances and sizes, and to number. We begin by measuring distances by the length of our feet, and counting the numbers on our fingers; we succeed in the end in counting the stars, and measuring the distance from planet to planet. This we call the mathematical study of nature.

* *

Having taken the general bearings of the universe, and noted the general features of the globe, we find that the material of which it is composed is not uniform; that earth, and air, and water differ in substance; and we finally arrive at the chemical constitution of matter. We find that the alphabet of nature is composed of sixty or seventy elements, out of which she creates her wonderful language, the rocks, the trees, and the fleecy clouds being her words and her poems.

* *

There is not an atom in the world, nor a world in the universe which is not in constant motion in space, subject to the "forces of nature." Some of these forces, or sources of motion, are known as:—

Gravitation, or mass attraction; cohesion, or molecular attraction; magnetism, or polar attraction; chemical affinity, or atomic attraction. Then there are:—Ordinary, or mass motion; sound, or air or mass vibration; light, or ether motion; heat, or molecular motion; chemical action, or atomic motion; electricity, or atomic vibration; and life, or cell motion; these being only rough general definitions.

* *

Seeing that we can hardly set up one of these motions without inducing another, it follows that we cannot study one without knowing something about the others. And this is why I warn you against becoming too keen students of chemistry before you have learnt something of general mechanics, of which chemistry is, in one aspect at least, a branch. If you do otherwise your study will be barren.

For the purpose of illustration, I divide science into three classes:—(1) The universe in "space and substance," which includes *Mathematics* and *Geography*, celestial, terrestrial, physical, and chemical. (2) The universe in "time," or *Natural History*, astronomical, geological, and biological. (3) The universe in "motion," *Physics* and *Mechanics*.

* *

However special your studies may ultimately become, do not narrow your minds down to one point. Step back from your work from time to time, remembering that it is only part of a universal study, and you will return with no less zest to your elements or your microbes for having gained a higher reverence for the architecture of the universe.

* *

Mr. Pike endorsed the recommendation that in preparing for examinations students should make a general study of science before commencing to read up the special subjects prescribed by the examining authorities, but at the same time he deprecated making a "hobby" of any particular branch of science until after qualifying examinations were passed.

* *

Mr. Clague said that nowadays it was impossible to become a good all-round man in scientific attainments, as in this go-ahead age one required most of his energies to master the ground covered by former workers before he arrived at the point when they could begin original work. He strongly impressed upon students the necessity for cultivating habits of observation behind the counter, in the open air, and, in fact, always.

A TRIO AT DARTFORD.

FIRE EXTINGUISHING.

MESSRS. BURROUGHS, WELLCOME & CO. made arrangements on Monday, Nov. 18, to have another fire—a pre-arranged and experimental one this time—in order to give Bland Sinclair, Tweedie & Co., of 11 Eldon Street, E.C., an opportunity of showing what their chemical extinguishers can do. One of our staff was there, and he reports that petroleum and a 10-foot pile of wood together sent flames in forked masses almost as high as the Phoenix Mills, and the crowd of interested spectators were content to keep a dozen yards away from the blaze, it was so hot, but Mr. Sinclair rushed in with one of his extinguishers, and in less time than it takes to tell it, he had the pile as black as night. Before the demonstration took place Mr. Sinclair told the company that he had given a demonstration in Dartford twenty-five years ago. Since that time the extinguishers had been greatly improved. They had been reduced in size to a fourth, without decreasing their efficiency. The extinguisher is a chemical one, depending for its efficacy on the fact that it discharges a stream of carbonic acid gas and water upon the burning mass. The vessel is made of a special metal, and can be carried in the hand. A mixture of sodium bicarbonate and chlorides is dissolved in a bucketful of water and poured into the extinguisher. Then a small bottle of sulphuric acid is placed in a "cradle" at the top, the lid screwed on, and the apparatus set aside until required. A push of the knob at the top breaks the acid bottle, chemical action is set up, and the force of the gas is sufficient to drive the contents in a fine stream to a height of 30 to 40 feet. The extinguishers and their contents vary in weight from 22 lbs. upwards.

WORK IN THE PHOENIX MILLS.

After this successful demonstration outside the Phoenix Mills our representative accompanied Dr. Percy Smith, the manager of Messrs. Burroughs, Wellcome & Co.'s factory, in a walk through the various departments, which are now almost in full swing, although it will be a little time yet before the loss of the Wandsworth machinery is fully made up. In our account of the opening of the works we gave an outline of the manner in which the works were to be fitted,

and we find that the plan has been carried out with here and there an improvement. The malt-extract department is a model of methodical arrangement and compactness. Beginning at the top floor, where maceration takes place, the sweet wort descends to large tanks in the floor beneath, from which it filters clear to the vacuum-pan below. The pan is a giant of its kind, being of fully 2,000 gallons capacity. Probably there is no bigger one in the kingdom. Amongst the appurtenances of this plant are a compact mill and sifter, which does its work in the dark and in rapid style, and a powerful filter-press. At present the plant converts fifteen quarters of barley into malt extract every day. In walking to the tabloid room we passed through two well-fitted experimental laboratories for the use of Dr. Smith and his assistants. In the tabloid room there are a dozen or more machines at work, but, as potassium chlorate tablets are compressed in a separate building, these do not represent the full compressing force of the factory; indeed, it is short of machines, the best ones having been destroyed at Wandsworth, and it takes time to replace them, as they are made on the premises. A walk through the machine-shop later enabled our representative to inspect the parts in course of construction. Tabloid making on a large scale is a very pretty operation. One sees the powder enter the machine, a piston descends, and a lever-arm advances to jerk the finished tabloid into a receiver. This goes on at the rate of five to ten times per second. The compressing of hypodermic tabloids is even prettier, as this operation has to be done by hand, each quantity of the powdered material being skilfully measured by the female operator and neatly placed in the mould before she moves the lever of the machine with the left hand. Finally the tabloids are checked by weighing. From this department our representative proceeded to the packing-rooms, first those devoted to tabloids, and then those to bottled goods, such as bazeline and "Kepler" malt. Chemists will no doubt have noticed that each label of "Kepler" malt is numbered. This is done by a young lady, who keeps a complete register of the labels and the packers who use them, so that at any time the history of any bottle can be traced. One of the departments, which was not mentioned at the opening of the works, is a kitchen provided for the workers, who are supplied with tea and other meals on the co-operative system. The firm have installed one of Fletcher's "Connaught" gas ranges, and have fitted up the kitchen in a very complete manner. A dining-room is also in course of construction. Altogether Messrs. Burroughs, Wellcome & Co. deserve to be congratulated on the progress they have made. The fact that they have a dozen mechanics at work in the machine-shop is itself an indication of what they are doing.

REFRIGERATING MACHINERY.

One of the directors of J. & E. Hall (Limited), engineers, who was present at the fire-extinguishing demonstration, invited several of the company to his firm's workshop to see a refrigerating machine in operation. This happened to be a machine for a Transatlantic steamer, and it was being tested before being sent off to Glasgow. The low temperature is obtained by condensing air. There are three condensing chambers side by side, with the engine behind. In the first chamber the air is condensed; then, as it becomes warm, it is passed through the second chamber, where it is cooled by water pipes, the heat being utilised for assisting in driving the engine. In the third chamber the air is allowed to expand, and in so doing it is reduced to a very low temperature. The thermometer actually showed -60° F. to be reached. It is interesting to note that this low temperature—92 degrees of frost—is, when one actually feels it, not so intensely cold as one would imagine. The cooled air as it issues from the machine is passed into the fresh-meat chambers on board ship; then it is used for cooling drinking-water, next for cooling larders, and finally for cooling the cabins. An ice-making machine was also inspected. This is made on practically the same principle as the cold-air machine, carbonic acid gas, which is capable of affording an exceedingly low temperature under compression, being used instead of air. When it is condensed and again allowed to expand carbonic acid becomes so cold that it solidifies, and while in this condition it is made to cool air, which in its turn is passed through a battery of vessels containing water. Very quickly the water is solidified.

Trade Notes.

A. J. WHITE (Limited) have declared an interim dividend of 5 per cent.

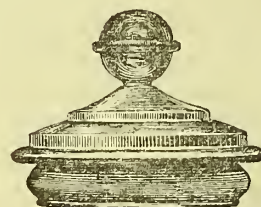
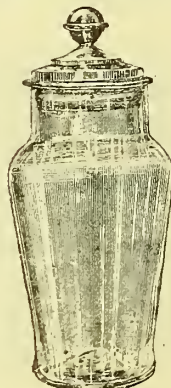
It is announced that Dr. Eugen Ostermayer has ceased to be a partner in the firm of H. Trommsdorf, manufacturer of pharmaceutical preparations, Erfurt, Germany.

DURING Mr. C. Sharland's absence in Australia Messrs. Sharland & Co.'s London branch will be managed by Mr. W. H. Goddard.

WE have received a copy of Messrs. G. B. Kent & Sons' new catalogue of hair, nail, tooth, and other toilet brushes and toilet requisites. It is well arranged and lucidly illustrated.

MR. HENRY C. QUELCH, 19 Ludgate Hill, is showing something novel in the way of sachets. These souvenir packets are got up in the most artistic style, with embossed heads and exquisitely perfumed. A very stylish show-card and two dozen free samples, themselves excellent sachets, are given with each dozen. The manufacturers are Messrs. Lazell, Dalley & Co., of New York.

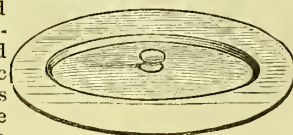
MR. C. MELIN, of Crutched Friars, has shown us samples of a new patent air-tight chemist's jar. The stoppers are made of pure nickel, with a strap of indiarubber round them



STOPPER, SHOWING POSITION OF INDIARUBBER BAND.

so that a slight turn of the knob makes the vessel air-tight. The jar is of novel shape, and has a handsome appearance, which will make it effective for many chemists' purposes.

LEWIS'S PATENT SANITARY CHAMBERINE.—This device, which has been patented by a chemist at St. Albans, is simply a light, cheap, and convenient cover for the utensil in a bedroom, and should be regarded as a valuable protector, especially in cases of illness. Its manufacture and sale have been taken up by Messrs. W. B. Fordham & Sons (Limited), the large makers of various household conveniences, at their King's Cross factory. They produce it in their patent steel pulp ware, a specially strong kind of papier-mâché. As an indication of the appreciation of the article in medical circles, the firm show us an order just received for a gross of the chamberines for a hospital in South Africa.



AN Austrian mineral water, known as the "Levico," from the Levico springs in the Southern Tyrol, is now being introduced to the medical profession of this country by the Levico Springs Company (Limited). Its principal medicinal constituents are arsenic and iron, and it comes endorsed with the strong recommendation of the most eminent Austrian medical professors as valuable in the treatment of scrofulous, anæmic, gouty, and other affections. According to the analysis of Dr. Ludwig von Barth, as published on the circulars, it contains 0.090542 parts of arsenious acid in 10,000. That would be nearly $\frac{7}{10}$ grain in a gallon; and Dr. von Barth says that is about twenty times as much free arsenious acid as is contained in any other mineral water. It is, besides, strongly chalybeate. It is recommended to be given in doses of one tablespoonful.

Medical Cleanings.

ointments for PILES.

THE *Rev. gén. de Clin. et de Therap.* submits the following as a good remedy:—

Acid boracé	3 parts
Cocain. hydrochl.	1 part
Lanolin	30 parts

M.

Dr. Kossobudski states that the local application of the following ointment gives good results in piles:—

Chrysarobin	12 gr.
Iodoform	5 gr.
Ext. belladonnæ	9 gr.
Vaselín	4 drachms

M.

In case of internal piles he uses the following suppositories:

Chrysarobin	1½ gr.
Iodoform	½ gr.
Ext. bellad.	¼ gr.
Glycerini	q.s.
Ol. theobromæ, q.s. to make a suppository.	

If there is severe bleeding a few grains of tannin are added. After three months' treatment with chrysarobin the hæmorrhoids are found to have almost completely shrivelled up.

CHLORALAMIDE.

DR. R. PATERSON communicates an article to the *Lancet* on this hypnotic, and in the course of it he states from observations that it would appear that chloralamide is not altogether free from some of the disadvantages attending the hypnotics already in daily use. Doses of 30 gr. and 45 gr. have been followed by giddiness, feeling of sickness, dryness of the mouth, and even slight delirium—symptoms which, though not alarming, are certainly disagreeable, but which seem to be inseparable from the action of almost all our sleep-producing agents. A comparison of the action of chloral with that of the amide shows that the latter is not so rapid, sleep coming on half an hour to an hour after its administration; whereas after chloral it often results in fifteen minutes. This slight disadvantage, however, is more than compensated for by the almost entire absence of action which chloralamide has on the circulation. The doses generally recommended are too large to begin with, more especially if the patient is a female or has been ill for some time. Usually 30 gr. to 45 gr. suffice in the case of a man, while 20 gr. to 30 gr. will give satisfactory results in a woman. Chloralamide has no action on the digestive organs, and the appetite remains unimpaired.

DEAFNESS.

DR. A. BRONNER, of Bradford, states (*Lancet*) that he has used pilocarpine in many cases of deafness, and in some with very good results. It is injected subcutaneously, and seems to be most suitable for the following classes of cases:—
1. Deafness caused by acquired or inherited syphilis, due to changes either in the internal or middle ear. These seem to be the most successful cases. 2. Deafness due to hæmorrhage or exudation into the internal ear. 3. Cases of chronic catarrh, with recurrent exacerbations. 4. Cases of sclerosis or dry catarrh, but only in the initial stages.

NASAL CATARRH.

AN American physician recommends the application, by means of a plug of cotton-wool on a suitable stem, of solution of chromic acid (1 to 10 per cent.). He believes that chromic acid instantly combines with gelatinous and albuminous substances to form a tough leather-like compound; $\frac{1}{200}$ of a grain of atropine should be given shortly before making the application, in order to lessen the flow of mucus. The parts are then carefully examined and the sensitive spots mapped out for the subsequent application of the acid solution. It is advised to operate on the two nostrils separately. Considering the powerful causticity of chromic acid, it is evident that only weak solutions should be used at first.

TREATMENT OF ASTHMA.

TINCTURE of lobelia causes nausea and vomiting, which lobelin never does. In repeated doses lobelin acts beneficially in asthma. The dose is $\frac{1}{8}$ to $\frac{1}{4}$ grain in pill, to be taken every three hours.

PHENACETIN IN WHOOPING-COUGH.

WE note that several physicians are writing favourably regarding the manner in which phenacetin reduces the number of paroxysms in whooping-cough. For children of two to five the dose is 1 to 2 grains every three hours. The remedy is well worth trying.

URETHRAL INJECTIONS.

MR. ALEXANDER DUKES points out, in the *Hospital Gazette*, that he has had better results in treating gonorrhœa with hot than with cold injections. This is a good point. Injections might be directed to be diluted with an equal volume of hot water before use.

DROPS FOR WAX IN THE EAR.

THE following solution facilitates the removal of wax in the external auditory meatus:—

Acidi borici	gr. lv.
Glycerini	f ʒjss.
Aquæ dest.	f ʒjss.

Warm a few drops before placing into the ear, and leave it there for a quarter of an hour.

CARDIOSTHENIC CAFFEINE PILLS.

THE following is a formula proposed by Dr. Huchard, a physician attached to the Hospital Bichat, Paris:—

Caffeine	100 grains
Benzoate of soda	100 ..
Extract of cinchona	2 drachms

For 100 pills.

Two to be taken three times a day.

A SIMPLE REMEDY FOR THRUSH.

FOR curing the thrush, which is so common amongst the ill-fed children of the poorest residents of our large cities, Dr. W. T. Ord, of Birmingham, advises the following lotion, to be applied frequently with a feather or brush to the white patches, which it removes after a few applications, leaving healthy mucous membrane:—

Lot. hydragryri nig.	} Partes æquales
Glycerini	
Misce.	

TREATMENT OF BURNS.

THE application of ice or cold is recommended as being of great advantage. If used judiciously from the beginning, or an hour or two after, the serum of the blisters is absorbed and cohesion takes place between the vesicle wall, cuticle, and *rete mucosum*, so that the skin returns to its natural state. At the recent International Congress of Dermatology and Syphilography, held in Paris, Schiff spoke favourably of the treatment of burns by iodoform, which is very successful in calming the pain. He stated that the blisters should first be cut away and the wounds gently washed with a weak solution of table-salt, then several layers of iodoform gauze are placed on the burn, the whole covered with a layer of oilskin. The first dressing should not be changed before the end of the first, or even second, week. When the burn is situated on the face an iodoform ointment (1 in 20) should be applied, covered with oil-silk. In the course of the discussion, Hebra said that iodoform gave very good results in the treatment of burns before the blisters become detached, but when that happens iodoform prevents the granulations from being covered with epithelium. Resorcin, on the contrary, in a solution of 1 or 2 per cent., favours the rapid formation of epithelium. We cannot say that we are enamoured of Schiff's proposal to wash the wound with a solution of table-salt. Also, it is as well to point out that authorities are divided about cutting the blisters. One says, "This is, doubtless, bad practice, for the serum is lost; and the blisters themselves become so many sores or wounds to be treated, as well as the other lesions of the burns."

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., November 23.

TRADE in the drug and chemical branches has been very quiet since our last report, and we do not think that any great improvement is likely to occur during the remainder of the year, as the holiday and stock-taking seasons are too close upon us for much speculative business, and merchants are, of course, disinclined to add to their stock. To-day's drug auctions were remarkably uninteresting, and miserably dull. There were very few alterations of any importance. Ipecacuanha is 1*d.* to 2*d.* dearer. Medium and ordinary vanillas keep firm, but fine lots sold at easy rates. For croton seed very high prices are asked, but areca nuts are not so dear as they were at the last auctions. Ergot of rye is a little easier, and gum euphorbium sold at a heavy decline. Nux vomica also went rather cheaply. Musk, rhubarb, cardamoms, and Sumatra benzoin show scarcely any quotable change. Gum elemi is again higher, and Tinnevely senna maintains its price. H.G.H. peppermint oil is quoted 3*d.* dearer, and there has been quite a run on cheap Japanese peppermint and menthol crystals. Druggists' opium rather dearer. Sweet oil of almonds has been advanced 1*d.* per lb., but some business is reported in cod-liver oil at somewhat lower rates. Camphor has again sold at a fresh advance, and galls are also dearer; while glycerine is held for rather more money.

In the chemical market we have to report an advance for refined camphor and cream of tartar. Sulphate of copper very firm, benzol and sulphate of ammonia dearer. Citric and tartaric acids, quinine, and chlorate of potash are weak, and bleaching-powder is lower. Shellac and cinnamon easier. Gambier a shade firmer. Beeswax full up, and Japan wax also selling at somewhat better rates.

THE CHARGES ON PRODUCE.—The dock companies announce that "in consequence of the recent strike" they are compelled to revise their rates and charges. Upon inquiry at their office, we were informed that the revised, *i.e.*, increased, charges will be obtainable on December 1, but that no particulars can as yet be given. It seems pretty certain, however, that drugs, drysalteries, and spices are not to escape revision. So far as we can hear, the rent-charges are not likely to be increased, and the full extent of the augmentation will fall upon the expenses connected with landing and otherwise manipulating the goods.

A WARRANT CASE.—A law case respecting the ownership of certain warrants has been impending for some time, Messrs. Ralph Godson & Sons, wholesale druggists, being the plaintiffs, and Messrs. Bryant & Aitkens, brokers, defendants. The Mincing Lane trade were looking forward to the arguments with much interest, but it now appears that there is to be no legal record of the case. We understand that a private arrangement has been come to between the parties, and that this has been ratified by a judge in chambers.

GUM ARABIC AUCTIONS.—At the public auctions of water gums, held last Thursday, it was proposed that no further auctions of arabic gums should be held this year. This proposal was apparently accepted, though no definite conclusion was arrived at. It is generally thought by the brokers that the decision arrived at will be to the advantage of the importers, as for several months there has been practically no genuine demand whatever for most descriptions of East Indian arabics, and it has only been possible to effect sales by constantly "slaughtering" parcels at a

heavy decline in prices. It is believed that with an interval of nearly two months before the next auctions orders will accumulate, and there will be a better chance of obtaining an advance, or, at any rate, preventing a further decline. It must be taken into account, however, that our stocks of East Indian arabics are exceedingly heavy, and likely to increase a good deal between now and the next auctions. Another matter which evoked a long discussion was the proposal by Charles Christey (Souratt & Co.) to first sell the ordinary lots of every catalogue and then to lump together all the odd packages in each catalogue which are now offered as separate lots and take up a good deal of time in selling, and dispose of them in one whole. This proposal also seemed to meet with general approval, but we understand that subsequently Mr. Figgis, who was not present during the debate on this matter, stated that he did not bind himself to agree to the suggested alteration.

THE FORTHCOMING AMERICAN EXHIBITION.—We noticed the other day that a committee had been appointed consisting of representatives of the various American industries to promote the 1892 exhibition scheme. To the names then given we can now add that of Mr. F. W. Devoe, of the firm of F. W. Devoe & Co., as the representative of the paint, oil, and varnish section. Money is being freely subscribed towards the exhibition scheme, and the contributions of the drug and drysalteries trades promise to be exceedingly handsome. Mr. S. W. Fairchild, of Fairchild Bros. & Foster, is soliciting subscriptions from these trades on behalf of Mr. John McKesson, jun., of the Finance Committee. All names obtained through that source are placed in the subscription-book in charge of McKesson & Robbins. The drug and chemical trades have thus far responded as follows:—McKesson & Robbins, \$10,000; Seabury & Johnson, \$10,000; Fairchild Bros. & Foster, \$5,000; E. Merck, \$5,000; Scott & Bowne, \$5,000; Ladd & Coffin, \$2,000; Lehn & Fink, \$1,000; H. J. Baker & Bros., \$1,000; J. L. Morgan & Co., \$1,000; Fraser & Co., \$1,000; Theo. Ricksecker, \$1,000; Tarrant & Co., \$1,000; Oil, Paint, and Drug Reporter, \$250; Druggists' Circular, \$150; Anglo-American Drug Company \$100.

ACIDS.—Citric rather quieter, and obtainable, we should judge, at 1*s.* 4*d.* to 1*s.* 4½*d.* per lb. on the spot, but for forward delivery 1*s.* 4½*d.* to 1*s.* 5*d.* per lb. is still asked. Oxalic dull at 4½*d.* per lb. Tartaric very quiet, and not quite so firm, at 1*s.* 3½*d.* to 1*s.* 4½*d.*, according to brand.

ALBUMEN—Several packages of egg albumen were offered to-day, and are held at high prices, 2*s.* 6*d.* for fair quality.

ALKANET ROOT.—For a parcel of common quality 2*s.* 6*d.* was refused, 5*s.* being the price.

ALOES.—The Cape steamers have not brought any this week. Thirty-four packages, mostly odd lots from second-hand, were offered to-day, but only a few cases were sold; drossy at 23*s.*, ordinary low at 12*s.* per cwt; good bright hard bought in at 30*s.* per cwt. nominal. Of Curaçao 268 packages were offered, of which just over 100 found buyers at low prices; fair bright Capey at 20*s.* to 21*s.*, ordinary dark liver at 12*s.* to 15*s.* 6*d.*, and a few very common aloes down to 5*s.* Fair pale liver mixed with common bought in at 40*s.* nominally. Of East Indian aloes 15 boxes were partly sold before the sale. Fair brown hard Socotrine bought in at 6*l.* 10*s.*

AMBERGRIS.—None was offered at to-day's auction. Fine qualities still remain extremely rare and fancy prices are asked.

AMMONIA SALTS.—Carbonate slow of sale at 3¾*d.* per lb. Sal ammoniac firm, with a continued good demand at 36*s.* and 34*s.* per cwt. for first and second quality respectively. In Sulphate prices show every prospect of continued firmness for some time, the demand, especially for export to the Continent, being particularly good. For Beckton, spot, 12*l.* 2*s.* 6*d.*, and 12*l.* 3*s.* 9*d.* for 24 per cent. grey is required, and 12*l.* 5*s.* for next year.

ANISE.—It is said that the stock of Russian anise has become much smaller lately, but prices nevertheless do not show much improvement. Fair seed was bought in at 20*s.* per cwt. at to-day's auctions, and we should quote the price

at 18s. to 20s. per cwt., according to quality. In Spain, we hear, the market for anise remains very quiet, with a total absence of speculation. At auction to-day 20 bags good bright *Italian* seed sold at 25s. per cwt.

ANNATTO SEED.—There is very little offering at present. At auctions 17 barrels Ceylon, rather mouldy, sold at 2½d. to 2¾d. per lb.

ANTIMONY.—*Star regulus* remains very firm and scarce at 72l. to 74l. per ton.

ARECA NUTS.—The high prices paid for this article are bringing forward small lots. Twenty bags were offered to-day, for which 20s. per cwt. was asked. An offer of 16s. 6d. was made but not entertained. It is very likely that these high rates will shortly cause sufficient arrivals.

ARSENIC.—Best white powder in kegs is still held at 13s. 3d. per cwt.

BALSAM (PERU).—Our market does not show any animation. For fair thin quality 3s. 10d. was asked to-day, and for unworked cloudy 3s. 8d. per lb., but no sales were made.

BENZOL.—The position of this article remains very strong, with prospects of a further advance; 90 per cent. is now held at 3s. 4d. to 3s. 5d., but for 50 per cent. 2s. 6d. is now required.

BLEACHING POWDER.—The prospect of renewed competition among the manufacturers and a large increase in the output continue to depress the market, and the article is unsettled and difficult of sale. For prompt delivery 5l. 17s. 6d. to 6l. per ton would be taken on the Tyne, and 5l. for contracts over 1890. The price in London is nominal.

BORAX.—Manufacturers' prices remain unaltered at 30s. to 31s. per cwt. according to brand. Second-hand stuff not so plentiful, at 28s. 6d. to 29s. per cwt.

BROMINE.—Steady but unchanged. *Bromide of potassium*, 1s. 5¾d. to 1s. 6¼d.

BUCHU.—The new crop which is now arriving appears to be of good quality. Ten bales of fine bright green round leaves, slightly stalky as usual, sold to-day at 3½d. for best, and fair medium to good, 2¾d. to 3d. per lb.

CALUMBA.—There is still an absence of demand, but we should not consider that a better tone for the article in the early future is altogether improbable. A parcel of 27 bags slightly wormy root, of mixed sizes, fair yellowish colour, were bought in at 20s. per cwt. to-day; for another small parcel of fair root 11s. was accepted.

CAMPHOR (CRUDE).—For the moment holders appear to have things pretty well their own way, and are able to put up the price after each transaction, while the refiners generally seem very badly provided, stocks being apparently even shorter in the hands of the Continental than in those of the English makers. At the end of last week a small transaction in Japan camphor, at 150s. per cwt. on the spot, was reported, and since then sales took place of about 250 piculs November-January shipment at 130s. per cwt., c.i.f. terms landed weights. Early in the present week, however, there were offers in the market at 125s. for arrival, c.i.f. terms, and that we still call the quotation. The Hongkong market was reported bare of stock in Japan camphor on October 23, and all small lots coming forward were being readily absorbed.

CAMPHOR (REFINED).—The continued advance on the price of raw camphor has compelled the English refiners to again increase their quotation by 1d. per lb., and they now ask for *Bells*, whether in large or small quantities, 1s. 7d. per lb. *Tablets* from 1s. 7d. to 2s. per lb., according to size and packages; and *Flowers*, 1s. 5½d. to 1s. 6½d. per lb.

CANELLA ALBA.—Fine quality has been scarce for some considerable time, and it would bring full prices. A lot of 13 bales, more or less damaged, small, broken, and brown quill, sold at 10s. per cwt. to-day.

CANNABIS INDICA.—Nine bales at a cwt. each good grey herb, mixed with seed, sold at 4d. per lb.

CANTHARIDES.—*Russian* and *Chinese* unchanged, and not in very great demand. Of broken coppery *Hungarian* one lot sold at 3s. 6d. per lb., and an offer of 3s. 3d. was refused for another lot.

CARDAMOMS.—The supply shown at to-day's auctions was a very poor one as regards quantity, and the demand was almost entirely absent, the best lots being bought in almost without a single bid. Altogether 42 packages of medium and ordinary were sold at fairly steady rates: *Ceylon Malabar*, fairly bright round small to medium, 1s. 6d. to 1s. 7d.; fairly good brown ditto, 1s. 5d.; ordinary small brown, 1s. 1d. per lb. *Mysore*, small to medium long yellow, 1s. 4d.; good round heavy small to medium, but very brown, 1s. 5d.; smaller ditto, 1s. 1d.; medium rather light brown, 1s. 3d. to 1s. 4d.; dark unclipped, partly split, 10½d. to 9½d.; small dull round, 1s.; good seeds, 1s. 6d. per lb.

CASCARA SAGRADA.—Very quiet, the price being nominal at 65s. to 70s. (c.i.f.) terms.

CASCARILLA.—A parcel of good small thin brown, partly silvery, sold at 31s. per cwt. to-day.

CASSIA FISTULA.—Ten cases pulp from Java, imported *via* Amsterdam (two 75-lb. tins per case), were offered to-day, and bought in at 25s. The owners suggested 17s. as the price.

CHAMOMILES.—No business worth mentioning, and prices remained unchanged and low.

CINCHONA.—Only a few parcels of little interest were shown at to-day's auctions. Twenty-four packages *Guayaquil* sold at fairly good prices: fine grey, mossy, silvery quill, 1s. 7d.; good brown, 1s. 2d. to 1s. 3d.; fair rusty, partly split and damaged, 2½d. to 5d. per lb. Fifteen bales *Maraicao*, good bold orange bark, sold at 7½d.; also full price. Of flat *Calisaya* a lot of good coloured, but thin and small, bark sold *che-apy* at 1s. 4d. to 1s. 6d. for sound, 8½d. to 1s. 3d. for damaged, and 4d. to 6d. for quite dark, undamaged bark. Another lot imported *via* Hamburg, very broken and small bark, was bought in at 1s. 8d. per lb. nominally. Up to this morning the following quantities of cinchona bark have been declared for sale at next Tuesday's auctions:—Ceylon bark, 1,156; East Indian bark, 286; Java bark, 101; and Cuprea (part, if not all, "without reserve"), 972 packages. The following figures refer to the shipments of cinchona from Java during the first three months of the season, July 1 to September 30:—

	1889	1888	1887	1886
Govt. Plantations, Amst.	lbs. 182,647	143,749	170,295	163,550
Private plantations	" 987,641	915,363	864,391	441,692
Total	1,170,283	1,064,112	1,034,686	613,272

CINNAMON.—A heavy quantity of *Ceylon* cinnamon was offered for public auction at the quarterly auctions held this week, the total being 3,103 bales. The assortment was a particularly good one, first and second qualities together forming about two thirds of the sales, and these grades were consequently dull of sale at 1d. to 2d. per lb. below the last auction prices. Common grades were in rather better demand, and sold at ¼d. to ½d. per lb. decline. The following was the range of prices:—Fine to superior firsts, 1s. 1d. to 1s. 6d. per lb.; low to good ditto, 7d. to 1s. per lb.; fine to superior seconds, 10d. to 1s. per lb.; low to good ditto, 6½d. to 9½d.; fine thirds, 10d.; low to good ditto, 6d. to 9d.; fourths, 5½d. to 11d. per lb.; and broken quills at 4½d. to 5½d. per lb. The stock of cinnamon in London at the end of October was 4,389 bales, against 4,427 in 1888, and 4,594 in 1887. The imports this year have been much smaller, and the deliveries considerably larger, than in either of the two preceding years.

CINNAMON CHIPS.—Of 632 bags Ceylon chips about two-thirds were sold by auction at full prices. Ordinary to fair, 2½d. to 3½d.; cuttings and quillings, 5d. to 6½d. per lb.

COCAINE.—The prices quoted in our last report are fully maintained, and the article is firm.

COLOCYNTH.—A few parcels shown to-day, but nothing sold. Fair Turkey apple, partly broken and seedy, is worth about 1s. 5d. per lb.

CONDURANGO.—The 21 bales mentioned in our last were again offered, and bought in at 1s. per lb.

COPPER (SULPHATE) scarce; for prompt delivery some seems still obtainable at 23l. 10s., though others ask 24l.; and for December 23l. 10s. is asked. There has been a good

deal of inquiry for early next year at better rates, say 22*l*. 10*s*. to 23*l*.

CREAM OF TARTAR.—Prices are fully maintained, and the position of the article seems a strong one. Best white French crystals are quoted to-day at 110*s*. per cwt., while for powdering 2*s*. 6*d*. to 3*s*. extra should be allowed.

CROTON SEED.—There has lately been a good deal of inquiry for this article, which seems to be very scarce at present, and in to-day's auction 30 bags of fairly good quality were bought in, the price asked being about 40*s*.—20*s*. was offered. Any considerable increase in the price will no doubt bring forward fresh parcels.

CUBEBS.—Thirty bags were offered to-day, all more or less dusty, mixed with spurious berries, and rather grey in colour. Five of these sold at 22*l*. per cwt., and the rest was bought in. The shipments of cubebs from Java have been moderate in September, and the exports for the first three months of the season amount to 242 piculs, against 108 piculs for the same period of 1888. About three-fourths of this have gone to Holland direct.

CUMIN SEED.—For 100 bags fair *Malta* seed of good flavour 25*s*. per cwt. is asked.

ELATERIUM.—Three hundred and eighteen ounces were shown to-day, and would be obtainable at the unaltered prices: 2*s*. 9*d*. per oz. for fine, 2*s*. 6*d*. for good, and 2*s*. 3*d*. for very dark.

ERGOT OF RYE.—We do not hear of much business in the private market. At auction several parcels *Spanish* were offered, and one lot of 4 bags good pale ergot sold at 1*s*. 4*d*., which seems about 1*d*. cheaper than quoted lately. For 5 cases of rather small ergot 1*s*. 2½*d*. was refused, the price asked being 1*s*. 3*d*.

EUPHORBIA PILULIFERA.—Three cases good bright East Indian herb, said to be of the new crop, were shown to-day, and bought in at 3*s*. 6*d*. per lb., though something less would certainly be taken. Another parcel of 3 bags, very dusty and stalky, was also bought in at 2*s*. 10*d*. per lb.

GALLS.—The available supplies of *China* galls are practically cleared at the prices of 71*s*. to 72*s*. per cwt.; while plum-shap'd galls have sold for arrival, November-January shipment, at 65*s*. 6*d*. per cwt., and business in the usual quality is also reported at 67*s*. 6*d*. for November-December. The improvement in *China* galls has caused more attention to be paid to Turkeys, especially whites, which have sold, according to quality, at 45*s*. to 47*s*. 6*d*. per cwt. Green Smyrna galls are quoted at 52*s*. 6*d*. per cwt.; and blues, which are very scarce, at 57*s*. 6*d*. per cwt. Fair Bassorah blues, 55*s*. per cwt. At to-day's auctions about 650 packages Turkey galls were offered, but nearly the whole was bought in, blues being held at 58*s*. to 60*s*., greens at 52*s*. 6*d*. to 55*s*., and whites at 47*s*. 6*d*. per cwt. Mail reports from Canton and Shanghai state that in the last week of October the new crop was beginning to come in. The quality was poor, and the yield will be small owing to unfavourable weather.

GAMBIER.—The market is rather firmer for arrival, with business in *block* at 26*s*. 6*d*. for September-October, and 26*s*. 4½*d*., rising to 26*s*. 6*d*., for October-November shipment.

GAMBOGE.—Only 5 cases were offered to-day, good bright selected pipe, of good fracture. One case was sold at 13*s*. per cwt., and that is said to be the price of the rest.

GLYCERINE.—Reported firm this week, although we do not hear of much business. Some of the makers have raised their prices, and now quote double distilled, s.g. 1.260, at 62*s*. to 63*s*. per cwt., according to quantity, but there are second-hand parcels offering at something below that figure.

GOLDEN SEAL ROOT.—Reports come from America that the autumn crop of this root will only yield about half the output of last season, and holders therefore are much firmer.

GUM ARABIC.—The parcels offered at auction to-day excited very little attention; some fine pale but dusty *Mogadore* sorts were bought in at a nominal price. *Australian* gum sold cheaply, at 36*s*. per cwt. for fair bright drop mixed with dust and slightly woody, and good ambery frosted *Cape* sorts brought 71*s*. per cwt.

GUM ASAFOETIDA.—Twenty-nine cases imported in

October were catalogued for sale to-day, but there were no bids. The quality is said to be inferior, soft, and dark.

GUM BENJAMIN.—*Siam* gum was not offered for sale to-day. Of *Sumatra* benjamin, about 83 cases came up for sale. They included a lot of 9 cases of exceptionally fine quality, the best gum of this description, in fact, which has been imported for several years, bold white soft almondy, of very strong flavour, and scarcely brown at the ends. For this lot fancy prices were paid, viz. 10*l*. 12*s*. 6*d*., rising to 11*l*. 2*s*. 6*d*. per cwt. Another lot of fine pale almondy seconds of good flavour, slightly brown corners, sold at 8*l*. 7*s*. 6*d*. to 8*l*. 10*s*., which is a little less than the price paid at the last auctions; fair almondy red bordered seconds brought 7*l*. 2*s*. 6*d*. per cwt. Of 25 cases *Penang*, 18 cases sold fairly well at 5*l*. 7*s*. 6*d*. to 5*l*. 10*s*. for brown, fairly almondy. Ordinary to very common *Palembang* sold from 25*s*. down to 5*s*. per cwt.

GUM ELEMI.—Twenty cases good to fine white Manila sold to-day at dearer rates—43*s*. to 47*s*. per cwt.; and another lot of 10 boxes, also good white, but dark on the surface, brought 38*s*. 6*d*. per cwt.

GUM EUPHORBIIUM.—The first arrival of the new crop of this drug, which has lately been imported in rather large quantities, was offered for sale to-day, and sold at a decline of about 25 per cent. Good drop, dusty as usual, but of pale colour, at 17*s*. 6*d*.; fair ditto, rather more woody, 14*s*. 6*d*. to 16*s*.; common blocky and dark at 3*s*. to 7*s*. per cwt. For the best lots the limit is 20*s*. per cwt.

GUM MASTIC.—Good bright yellow drop bought in at 2*s*. 4*d*. to 2*s*. 5*d*. per lb. Four cases common *Persian* also bought in at 4*d*. per lb.

GUM MYRRH.—Very little demand, and of 25 packages offered to-day only a few sold at 60*s*. for good small siftings, and 25*s* for pickings. Good pea-sized siftings are held for 80*s*. per cwt., an offer of 70*s*. being declined.

HEMIDESMUS INDICUS.—The demand for smilax seems to have quite subsided, and for 11 bales from Madras, good flavoured, rather dark, 1½*d*. was the best bid obtainable, which was refused.

HONEY continues to sell at full prices. Ten kegs hard pale *Chilian* honey brought 46*s*. to 46*s*. 6*d*. per cwt. to-day, while 17 kegs rather yellow candied were bought in at 40*s*. per cwt. Fair half-candied yellow *Jamaica* sold well at 37*s*. per cwt.

IODINE.—The combination price of 9*d*. per oz. is still maintained for this article. *Iodide of potassium*, 11*s*. 6*d*. per lb. The *Britannia* has brought a consignment of 102 kegs iodine from South America this week.

IPECACUANHA.—One broker offered 63 serons to-day, which are very firmly held by the owners, 27 serons selling at about 2*d*. per lb. advance on the last auction rates. Fair, partly thin, mixed to good stout, sound root brought 6*s*. 10*d*. to 7*s*. per lb.; first-class damaged and slightly mouldy, 6*s*. 7*d*. to 6*s*. 10*d*.; second-class damaged 6*s*. 7*d*. to 6*s*. 8*d*. per lb. For a small pocket (about 16 lbs.) of exceptionally fine bold selected root (picked in South America), 9*s*. 9*d*. per lb. was readily paid.

JALAP.—For good heavy Vera Cruz root 9*d*. per lb. is still asked. *Jalapine resin* has advanced in sympathy with the root, and is selling now at 20*s*. per lb.

KAVA KAVA.—About 100 lbs. of this root sold to-day at 7*d*. per lb. subject to approval.

LEAD (ACETATE).—Firm and selling freely at the combination rates quoted in our last report.

LIQUORICE.—Nine 2-cwt. bales of decorticated liquorice, very ordinary, damp and mouldy, were bought in at 40*s*., nominally, per cwt.

MATICO.—There is very little demand for this article, and a few bales shown to-day were all bought in at nominal prices. Fairly bold leaf, rather dark mixed, 6*d*. Ordinary 5*d*. per lb. nominally.

MERCURIALS remained the same as last quoted on the basis of 3*s*. 7*d*. per lb. for calomel.

MORPHIA.—The makers are firm at 5*s*. per oz., perhaps 4*s*. 9*d*. for large compacts.

MUSK.—Several parcels were shown to-day, including some very good first-pile *Tonquin* pods, but in the absence of any demand no alteration of price can be quoted, although, to sell, the article might be called cheaper. First pile *Tonquin* pods, one tin, thin blue skin, well trimmed, slightly damp, sold at 89s. per oz., subject to approval. For another lot, small to bold pods, partly blue skin, partly old-fashioned, 87s. 6s. per oz is asked. There were no bids. Third-pile, partly spurious, damp, and badly trimmed, sold at 32s.; fair, but rather skinny, at 36s. per oz.

NUX VOMICA.—Of the recent arrivals 500 small bags, $\frac{1}{2}$ cwt. each, *Cochin*, rather small, partly perished, and not very silky, were offered, and a bid of 7s. was refused, the price being named at 7s. 6d. per cwt. Sixty bags fairly silky from *Bombay*, fair coloured, sold cheaply at 7s. 9d.

OIL (ALMONDS).—English pressed sweet oil of almonds has been advanced to 1s. 5d. per lb.

OIL (CASTOR).—The market has ruled somewhat quiet this week, at $4\frac{1}{16}$ d. to $4\frac{1}{2}$ d. per lb. for good *Calcutta* seconds. At auction to-day several parcels were shown, but no sales were effected. Liverpool holders of good *Calcutta* seconds still stand out for $4\frac{3}{4}$ d. per lb., and are not at all disposed to take less, but business has been of a very limited character.

OIL (COD-LIVER).—We hear of sales of good non-freezing *Norwegian*, at 60s. per barrel "c.i.f." terms, which is rather lower than the previous quotation.

OILS (ESSENTIAL).—*Star-anise* oil very firmly held, with little offering, at 6s. 3d. per lb. on the spot. One case of fairly good *Cinnamon* oil brought 1s. 6d. per oz. to-day. *Cassia* quiet at 3s. 7d. to 3s. 8d., nominally, on the spot. *Citronella* rather steady at $\frac{1}{16}$ d. to $\frac{1}{4}$ d. per oz. on the spot for native brands. Thus far the shipments from Ceylon show a considerable falling off as compared with the previous season. Twenty-seven cases which were to have been offered for sale to-day were withdrawn. *Lemon-grass* steadily held at $1\frac{1}{2}$ d. to $1\frac{3}{4}$ d. per oz. *Peppermint*: American peppermint-oil is now quoted 3d. per lb. dearer, the current price for H.G.H.'s brand being 11s. 3d. per lb. There has been a very active demand, we hear, for Japanese oil, and several old parcels of native brands have been taken off the market, and the price now generally asked being from 4s. 3d. per lb. upwards, though 4s. might perhaps still buy a twenty case lot. *Menthol* crystals have also been in sudden demand, and have been run up to 7s. 6d. for fair native brands, though we have not heard that that price has been actually paid. All cheap lots have, however, been cleared.

OIL (OLIVE) steady but quiet at 35l. to 35l. 10s. for *Mogadore* and 36l. for *Spanish* and *Sicilian* oils. At to-day's auctions 5 cases (12 bottles each), of which we did not see a sample, imported from Lisbon, were offered at 3d. per bottle, but whether the bottles were pint or quart bottles the auctioneer did not know. No one tumbled to the bargain.

OPIMUM.—There is not very much doing in *druggists'* varieties, but recently 12s. per lb. was bid for fine *Karahissar*, which had previously sold at 11s. 6d. per lb. From Smyrna we hear, under date of November 15, that the news from the growing-districts, indicating continued drought and a bad outlook for the coming sowings, at first failed to influence holders on the Smyrna market, but subsequently the news became more alarmist, and numerous buyers appeared in the market, including the agents of the Philadelphia chemical works, and important sales were made at increased rates. It is explained that the only reason why the Smyrna holders are willing to sell so freely, in spite of the alleged favourable prospects for the drug, is that they had previously made very heavy advances on it to the exporters in the growing districts, and were anxious to unlock their money. As regards the sowings and the crop prospects, a correspondent writes: "The September-October sowing, called the winter sowing, has not taken place yet on account of the drought, except to a very small extent, about a quarter of the whole. This sowing is the one which usually succeeds best. Opium can also be sown between November and January, and even in February, but the December-January sowing generally gives only a middling result, and that of February only succeeds with exceedingly favourable weather. The result is that in all probability we shall be able to count only upon a middling

or small crop for 1890, unless exceptionally favourable weather brings about a complete success, and consequently a good crop. On November 10 it rained in Smyrna, and also in some places round about, and on November 13 there was snow on the mountains by which the town is surrounded, and since that day the weather has been very cold and dry, which is not favourable for the sowing."

POTASH SALTS.—Best *Montreal Potashes* slow of sale at 21s. per cwt. in Liverpool, and *Pearlashes* offering at 30s. 9d. per cwt. *Bichromate* selling quietly at 4d. per lb. *Chlorate* rather easier with sellers for prompt at $4\frac{1}{2}$ d., or perhaps even $4\frac{3}{4}$ d. per lb. *Prussiate* firm and obtainable at $7\frac{1}{4}$ d. to $7\frac{3}{4}$ d. per lb. for yellow, according to brand. The convention of the Stassfurt potash works has been renewed and *Sulphate* and *Muriate* of potash are being offered for the coming year at unchanged rates. With regard to the recent fall in the combination price of *Pernanganate of potassium* it is now said that the maker by whom the syndicate were being undersold has joined that combination.

QUICKSILVER.—The importer maintains his quotation at 9l. 15s. per bottle, and second-hand holders have been selling at 9l. 8s. to 9l. 9s., but to-day they adopt a firmer tone, and are standing out for 9l. 10s.

QUINCE SEED.—Four bags from the Cape, fair quality, sold at $4\frac{1}{4}$ d. per lb.

QUININE.—Since our last report the market has been much quieter, and during the first part of the present week scarcely any business was reported, while second-hand offers were going round at 1s. $2\frac{3}{4}$ d. per oz. for German "spot" quinine in bulk. Since then there have been a few sales at 1s. 3d. per oz. for March delivery Brunswick bulk, and to-day the B. & S. agents are soliciting orders at 1s. $3\frac{1}{2}$ d. per lb. for January-March on the spot. We should call the nearest price certainly not above 1s. $2\frac{3}{4}$ d. per lb.

RHATANY.—For ordinary dark and very chumpy root $4\frac{1}{2}$ d. is required.

RHUBARB.—140 cases were offered to-day. The demand was rather small and confined to the best descriptions, and also to the very lowest, a large quantity of very wormy root being sold, principally, we believe, for export to America. Fifty-nine cases brought the following prices, which show practically no alteration from those of the previous auction. *Shensi*, fine, round, medium to bold, yellow coat three-quarters pinky fracture, 2s. 9d. per lb.; second size, 2s. 4d.; third size, 2s. 2d. per lb. Fine, heavy, flat, medium to very bold, good, grey, pinky fracture, 2s. 7d. per lb. Good round, medium to bold, partly dark fracture, 1s. 6d. per lb. Fine flat, very bright coat, small to medium, very good fracture, 2s. per lb. Good bold to rough mixed pickings $7\frac{1}{2}$ d. to 1s. per lb. Untrimmed, mixed sizes, round, fair, pinky fracture, 7d. per lb. Old and very wormy *Canton* and *Shensi* from $5\frac{1}{2}$ d. to $7\frac{1}{2}$ d. per lb. High bright, small to medium, good bright coat, and fair pinky fracture, 11d. per lb.

SAFFRON.—A good business is reported this week at steady prices, and from Spain the news is rather in favour of higher rates.

SARSAPARILLA.—Grey *Jamaica* rather cheaper at 1s. $4\frac{1}{2}$ d. For sound rough, 1s. 2d. to 1s. 4d.; more or less damaged coarse *Lima Jamaica*, 1s. 1d. for sound; and *Guayaquil*, good sound chumpy root, 1s. 2d. per lb. *Honduras* sarsaparilla is held at 1s. 6d. per lb. for fair quality.

SCAMMONY.—English *Resin* quoted at 13s. per lb. *Roots* practically unobtainable even at 50s. per cwt.

SENNA.—*Alexandrian* leaf held at 1s. 7d. per lb. for good medium and 7d. to 9d. for broken leaf. *Tinnevely*, 290 bales were offered to-day, of which about 260 sold at full prices, but without quotable change, the assortment being rather inferior as regards quantity. Good green leaf, bold, partly specky, 8d. to $8\frac{1}{2}$ d.; rather mixed, but good green colour, 6d.; small, but medium green and yellow mixed, $3\frac{1}{2}$ d. to $4\frac{1}{2}$ d.; ordinary small, and brown to fair, 1d. to $2\frac{1}{2}$ d.

SHELLAC.—The week opened with a firm but quiet feeling, which gradually became more accentuated as the auctions, for which rather a large supply had been advertised, drew near. *Fine orange* lac had been in some request in the private market, with sales of ASSL brand at 110s. per cwt., and at 103s. "c.i.f." terms for arrival, Nov.-Dec. shipment.

Good second orange sold on the spot at 79s. per cwt., and Garnet AC at 67s. to 68s. per cwt. The auctions comprised 1,230 cases, of which about 500 sold at a decline of 1s. to 2s. per lb. on *Orange*, as compared with the previous auctions; weak and livery to fair red seconds, 74s. to 76s.; fine pale but cakey, 80s. per cwt.; *Garnet AC*, slightly cakey, to good free, 66s. to 67s. per cwt. Since the auctions the market has been quiet, and at to-day's call the quotations were easier, as follows:—

		Dec.	Jan.	Feb.	Mar.	Apr.
Orange TN, sellers .. ..	..	77/6	100	100	79/	79/
„ buyers .. ..	..	76/6	at 78/	at 78/	77/	77/
Garnet AC, sellers .. ..	..	68/6	69/	70/	—	—
„ buyers .. ..	..	67/	67/6	67/	—	—

SODA SALTS.—*Ask* very firm and by no means plentiful at 1½d. per degree on the Tyne, and 1¾d. landed in London. *Bicarbonate* is still in good request at last week's improvement, 5s. 6d. to 5s. 9d. per cwt. ex warehouse. *Caustic* dull, with somewhat pressing offers: 60 to 70 per cent. white at 7s. 6d. to 7s. 9d. per cwt.; cream, about 6d. less. *Crystals* rather firmly held at 54s. 6d. to 56s. London, and 45s. 6d. to 46s. 6d. per cwt. on the Tyne. *Nitrate* firm at 8s. 4½d. to 9s. per cwt., according to strength.

STROPHANTHUS.—Two bags *Holarrhena* were offered without reserve to-day, but no bids could be obtained for them. It is a remarkable coincidence that this article should have been packed in bags bearing the mark which has hitherto been in special request as that of some of the best green seed.

TEA.—The China market is quiet but firm, and with light sales of Congou, the grades of Moning from 5d. to 6d., which have of late been so remarkably cheap, show the inevitable hardening. However, they are only fractionally dearer, and well worth attention at present rates. Kaisows are selling at about previous prices, commonest old fetching 4d., and fair Soomas realising 5¾d. Panyongs from 8d. to 10d. are selling very reasonably, and very fine quality teas may be picked up at this range. A quantity of fourth-crop Newmakes have arrived, being the first shipments for the season, and sold fairly cheaply from 7½d. to 9½d., commonest fetching 5½d. Scented teas are quiet. Assams opened with a dull tone on Monday, but subsequently show some slight recovery from the recent fall, a few more country orders having given dealers a little more pluck to buy. Pekoes from 9½d. to 1s. are still very cheap and most useful teas, while all finer grades, both Pekoes and broken Pekoes, are weak. Ceylons are fairly steady, but country buyers are disinclined to go into stock, waiting for a further decline in December.

WAX (BEES').—In good demand at very full prices. *Jamaica*, good red to fine even yellow, 6l. to 6l. 2s. 6d.; orange and brown mixed, 5l. 15s. to 5l. 17s. 6d.; brown and dark, 5l. 7s. 6d. to 5l. 12s. 6d. *Australian*, rather dark to good bright colours, 5l. 5s. to 6l. *Madagascar*, fair chocolate to fine pale, 4l. 17s. to 5l.

WAX (JAPAN).—In better demand, and selling at 46s. for good pale squares.

WAX (*Myrtle*).—For two cases from the Cape 20s. were said to be the limit, but they sold subject to approval at 14s. per cwt.

THE AMERICAN MARKETS.

(Telegram from our Correspondent.)

NEW YORK, Thursday morning.

CASCARA SAGRADA.—The market is rather easier, and good genuine thin bark may be had at 65s. per cwt. "c.i.f." terms.

OIL OF PEPPERMINT.—Holders remain quite firm on the basis of 10s. 6d. per lb. "c.i.f." terms for H. G. Hotchkiss' brand, but buyers are pretty well agreed in holding off; there seems to be a general expectation among them that by doing so they will be able to force lower prices.

SPERMACEIN has again declined, and is now offering at the rate of 11¼d. per lb. c.i.f. terms for refined.

THE GERMAN MARKETS.

HAMBURG, November 26.

BUSINESS has been steady last week, and the late improvement in our drug and chemical market continues. The advance in value of most articles has been caused rather by actual demand than by a speculative inquiry, and is therefore likely to be firmly maintained. Camphor, in common with most Japanese articles, appears to make solid improvement. Quinine is again quiet, but steady in price. We hear of more business in Peru balsam, and a firmer market in saffron.

The prices in this column are given in marks (11¾d.) per 100 kilos. or per kilo. (1 kilo. = 2 lbs. 3½ oz.; 50¼ kilos. = 1 cwt.)

ANTIMONY.—*Crude Japanese* is still tending dearer; 93m. has been paid on the spot. Stocks being reported scarce everywhere.

BALSAMS.—Of *Copaiba* several small consignments have been received, and sold well at full prices. For Maracaibo up to 5.15m. is being asked. *Peruvian* is firmly held at 7½m. to 8m., and would appear not unlikely to advance further.

BARKS.—In *Cinchona* Porto Cabello there is a very good demand for the better qualities, and 250 bales prime bark have been taken at full prices; the common sorts remain quite neglected. *Cascara sagrada* quiet but steady in price, genuine qualities being offered at 140m. *Condurango* a little weaker. *Quillaya* fairly steady—holders ask 34m.

CAMPHOR (REFINED).—A lively speculation in the article has caused a further rise; it is said that 3.35m. has been paid.

COPPER (SULPHATE).—A very large business has been done this month for France, Spain, and Italy, and although for the moment the demand is a little easier, there is no doubt that these countries will still buy very large quantities for next year's delivery. For French account more than 300 tons remain uncovered for January to June (monthly), and the last price paid is 48m. c.i.f. French ports. Our German factories and royal mines decline to sell for April-June delivery, and they have withdrawn all their previous offers. Before February or March they will not make any contracts, and we heard that nothing will be sold under 47m. free on rail at the works.

JALAP.—The price keeps up very well, and prime root cannot be had under 145m. to 150m. The supplies here are small.

QUININE, which had advanced to 45m., is less firm at present, and German brands in the second hand were sold at 42½m.

SAFFRON remains very firm. Prime Valencia is quoted at 98m. to 100m.

WAX (JAPAN) very quiet, although vigorous efforts are being made to put speculative life into the article. Prime whitish squares can be had for 89m. to 90m., according to quantity.

THE AMSTERDAM MARKET.

AMSTERDAM, November 27.

CINCHONA.—The bark sales in Amsterdam on December 12 will consist of 2,266 bales and 136 cases, viz.:—*Succirubra*, 360 bales 44 cases; *C. Ledgeriana*, 1,433 bales; *C. Officinalis*, 35 bales; *C. Schuhkraft*, 11 bales 9 cases; *Hybrides*, 427 bales 83 cases. The ten periodical public sales for 1890 have been fixed for the following dates:—January 16, February 20, March 27, May 1, June 5, July 10, August 28, October 2, November 6, December 11.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries, &c. will be attended to in the order received.

The Sale of Poisons by Unqualified Persons.

We are obliged to abbreviate considerably the opinions expressed on this subject this week. It was well threshed out in our last.

Mr. D. Walton, Manchester, expresses surprise at finding any objection to Judge Holroyd's decision. "I should have thought," he says, "all qualified chemists would have been glad, like myself, to see our position lawfully vindicated. It is one of the things I have been hoping for, and I cannot see why we should be so different from any other body of men as to feel any sympathy with persons who persist in remaining in the trade after having failed to prove their fitness for it. I wonder how much sympathy, or even mercy, the doctors or lawyers would show if they happened to be placed in the same position. I may say that I cannot afford to pay for any assistance in my shop, and if I have to leave it at any time I leave strict orders with my wife or daughter not to sell any poison. A chemist who expects to be able to leave his shop often has got into the wrong vocation, and should have been a grocer or draper. In short, I think most chemists will agree with Judge Holroyd, who fails to see where the hardship is."

Pharmaceutical Chemist (182/21) points out that the common practice in the everyday dealings of life is to hold the principal responsible for his subordinates. If a lawyer's clerk commits an error in drafting a deed we hold the lawyer responsible. If a builder's workman scamps his work we hold the builder responsible. Why should a different view be taken when the relations that exist between the chemist and his customer are in question?

Attraction (183/2), remarking that dispensing is included in the sale of poisons, thinks it has been overlooked that the Pharmaceutical Society expressly recognises dispensing by unqualified men, in the requirement that candidates for the Minor shall have been for three years practically engaged in the translation and dispensing of prescriptions. If this does not agree with the Act it is for the Society to settle the discrepancy; but our correspondent argues for "understanding the Act in a broad spirit, and acknowledging the employer as the responsible party." He sees "a great difference between a chemist who is constantly training and supervising his apprentice in the use of drugs and poisons, and a grocer who is totally ignorant of the articles he deals in, and, therefore, is incompetent, not only to teach, but also to be responsible."

Endys (183/5) advocates a new Act, providing that after a certain period none can hold a business except with the Major qualification, those already in business to pay a certain sum to acquire that qualification; qualified chemists and druggists or pharmaceutical chemists only to sell poisons; all preparations containing poisons, including patent medicines, to be sold only by those qualified; no store or company to sell drugs or dispense unless the principals are pharmaceutical chemists; prescriptions containing poison to be dispensed by qualified men only. He adds: "Many will not

like the stringency of the above, but they must be short-sighted not to see the good of it in the future."

Mr. Alfred P. Barnard, High Road, Stamford Hill, refers to several cases of chemists in business who had not had proper training for the business, and argues that "the Pharmacy Act was passed to prevent this, and certainly not to prevent the man who has served his apprenticeship to a duly-qualified chemist and druggist from following his occupation as an assistant, and earning a livelihood." He asks "where is the logic of the argument that Battle's poison for destroying vermin shall only be sold by a registered and qualified chemist, whilst Fellows's syrup of the hypophosphites for human consumption, also containing strychnine, may be sold by the unqualified and unregistered oilman and general store dealer? In the interests of those who have paid large premiums and served terms of apprenticeship, and in many cases subscribed for years as apprentices or students to the Pharmaceutical Society, I for one do not agree with the verdict, and I will willingly assist to take the case to the Court of Appeal, and, if necessary, to the House of Lords, and, failing there, back to the House of Commons."

A Country Chemist (183/67) mournfully remarks that, if the ruling of Judge Holroyd is correct, he will be obliged to keep a qualified "fool" in place of an unqualified "wise man," for such has been his experience generally during the thirty years he has been in business. As a rule the best workers and most reliable dispensers were unqualified.

SIR,—You say you do not catch the point of my argument. Possibly this is because you import your own ideas into my argument. You make my "five offences" "five groups of offences," and ask whether a man must commit "the whole" of one of these groups of offences before he can be convicted. My point, however, is, as you will see by referring to my former letter, that these are not groups, but that in each case, though the offence is variously stated, it is but "one and the same." My argument, in fact, is precisely the one urged by Mr. Symes at greater length, and with much greater force, for where I charitably endeavoured to find a meaning Mr. Symes sees only "tautology." And it is evident that, construed as you would construe it, much of this fifteenth section is positively meaningless. Take, for instance, the second of my five clauses—"Who shall take, use, or exhibit the name or title," &c. You admit that this must be read precisely as the first clause is read, and you, therefore, see here three distinct offences, any one of which may be committed without a committal of the others. But surely any one who "takes" this title, or "exhibits" it, "uses" it also! The offence is the same whether he "takes" or "exhibits" or "uses" it. Similarly, to style oneself a pharmacist, not being a pharmacist, is the same offence as to style oneself a pharmacist, not being a pharmacist; and to "sell" is the same as to keep open shop for the purpose of selling. The phrase is varied, as I suppose, that no room may be left for quibbles and evasions, but only one offence is, in each case, aimed at, and that offence is one that can only be committed by the proprietor of a business. I have purposely confined myself to this fifteenth section, but the force of the argument is immensely increased by such a survey of the whole Act as Mr. Symes makes. The cumulative force of Mr. Symes's different "points" is, indeed, to my mind, irresistible; and I cannot think that on appeal an application of the section can be upheld which depends upon the interpretation of one word only in it, in a sense that is contradicted by almost every other word in the Act.

Yours, &c.,

C. C. BELL.

Epworth, November 25.

[Mr. Bell's argument is assuredly untenable. To take, use, or exhibit the title indicates three distinct ways of infringing the Act. A man "takes" the title when he describes himself as a chemist; he uses it if he sell articles labelled with the name of someone else, chemist; he may exhibit it if he put over his door "X, late Blank, chemist." These are samples of the shades of difference suggested. So, too, a man may call himself a chemist, a druggist, a pharmacist, a pharmaceutist, and in either case he infringes

the Act if he is unqualified. He does not need to call himself all the titles indicated. And, once more, he may sell poisons, or he may keep open shop for selling them. The distinction is quite obvious, and for either offence (he may or may not have committed both) he is liable to a penalty if he is unregistered.—ED. C. & D.]

SIR,—If, at a meeting of the great army of unqualified, a bombshell had exploded in their midst it could not have startled them more than the “extraordinary” decision of Judge Holroyd; and whatever may be done to explain it away, some by making the law fit their individual cases, others by “interpreting” the meanings of the founders of the Act, and another section contenting itself by courting pity for long and arduous services, there still remains the blot upon their fair fame, and now or never is the time for them to parade all their forces, and either wipe it away, thereby exalting themselves to the position of the qualified, or allow it to remain and “be for ever fallen.”

There is no doubt the promoters of the Act aimed at excluding those unfitted, both in education and skill, from becoming members of a profession requiring both. I am well aware that the diploma does not necessarily carry with it a guarantee of good countermanship—in fact, some of the worst men at the counter I have seen for their experience were M.P.S., but they made up for their deficiency by their skill in dispensing. There are two other arguments put forward by the unqualified; the first is, “they have read as much of the various subjects as the qualified man.” Then why do they remain without the diploma? Secondly, they say, “We get just as good a salary.” Granted; sometimes even better. But then all those dreadful bogeys that they frighten themselves with, such as the “qualified junior of short service lording over them,” would be things of the past. Oh, ye unqualified! it is very hard, after twenty-one years of uninterrupted bliss, your position should be assailed, your defences broken down, and you made to appear as law-breakers; but take courage, and solve the problem by presenting yourself before the examiners until you become the happy possessors of the all-powerful

THIS IS TO CERTIFY, &C. (184/22.)

Yorkshire (185/66) says:—If the new reading is maintained, it will render it imperative for the chemist who does not keep a qualified assistant, and who has the misfortune to be called to serve on a jury, to engage a qualified man to sell poisons in his absence, although he may have one or more assistants who are otherwise quite capable of managing the business for a few days. He will thus be mulcted in the expenses of a *locum tenens*, or during his enforced absence no poison of any kind may be sold. Some may say this would involve no loss worth mentioning, but in country districts, where poisons are sold frequently and in considerable quantities, it is a decided injustice and inconvenience. The inconvenience and annoyance will be equally felt in everyday life. The argument that it would be no worse for chemists who conduct their businesses with apprentices than it now is for those who conduct them single-handed is not to the point. If one man labours under a disadvantage, it is no reason why another should be compelled to do so. Mr. Abraham's speech at Liverpool goes to show that the Council themselves do not believe that the “seller” in the fifteenth section was intended to mean the person who actually conducts the sale. His remark that “it had lost several cases from the old point of view, and now wished to try the other” is very pertinent, and, coming from a member of the Council, we may take it to be correct. If this is their reason for the change of front, it seems rather hard lines that the unfortunate apprentice or junior should be made the scapegoat. I do not agree that the new state of affairs would have a tendency to raise the opinion of the public concerning qualified chemists. I venture to think that the proportion of the public who would look at it from this point of view is very small indeed. It is no uncommon experience for us to be told by a customer, in a tone which savours of a mild grumble, “I can get this” (referring to some poison for which he is signing) “at So-and-So's without all this bother.” How seldom do we meet with a customer who expresses any admiration for or approval of the

practice. With regard to the stores it cuts both ways. True, it will prevent their unqualified assistants selling poisons, but so it will ours. They will have to engage qualified assistants, so will we, at any rate such of us as at present keep unqualified ones, and I imagine they form a majority.

Scotia supports the suggestion of “R. T. R.” regarding the age at which candidates ought to be allowed to present themselves for examination, and asks, “Where would chemists come from if unqualified apprentices and juniors were of no use? Where and when would they be expected to gain experience?” He (“Scotia”) passed the Preliminary five years ago, has served a long apprenticeship, and has still eighteen months to wait till he can present himself for the Minor. If such an examination did not qualify young men to keep shop on their own account, it might at least qualify them to do legally what thousands do illegally.

Copies of Prescriptions.

SIR,—In reply to “Self Protection,” I have been in the habit of charging 10s. each for copies of prescriptions, with the exception of cases where the original has not been returned. When the patient has got back his prescription I fail to see his claim on any copy we may make for our own personal convenience, and to give such a copy without adequate remuneration would be sheer folly. The fact of a customer leaving my locality has no weight with me, as there is such an institution as the “parcel post,” of which he can take advantage, and I usually compromise the matter by paying postage. I have a customer at present to whom I send a large supply of medicine every week: in such a case I would not take 5s. for a copy, the prescriber being dead, and there being no fear of my customer's demise for years to come.

Yours very truly,

JAM. (173/53.)

Mr. Machin, who writes on this subject, merely re-states the difficulty. We may add that the ethics of the matter are discussed in “The Art of Dispensing,” pages 9–11.

Misleading Testimonials.

SIR,—Within the last few months we have had some curious experience of assistants, for which we are chiefly indebted to the unfaithful characters of employers. No. 1 was strongly recommended by his late master. He was dirty, surly, and churlish to customers. No. 2 had a good testimonial from a respectable firm in an important county-town, where he had been apprenticed. He was grossly ignorant and unpleasantly addicted to drink and tobacco. No. 3 was engaged on the strength of a copied testimonial, which certified all that could be desired, and which turned out to be a forgery. No. 4, a well-educated young man, respectably connected, and recommended as “honest and steady.” He was clever, competent, good address, smart counter-man, dishonest, and drunken. No. 5 applied personally. He had the manners and appearance of a common porter, which probably was his real calling. He seemed to have been recently rigged-out at a cheap ready-made clothes shop. No. 6, a gentlemanly young man of the mature age of 20, with four years of country experience, appraised himself at the modest sum of 50s. a year, indoors. Is it not a duty which employers owe to themselves as well as to others to give, confidentially, faithful, impartial, and reliable characters? By all means let the fullest credit be given to deserving merit, as an encouragement to young men in the arduous path before them; but concealment of serious defects is simply a premium to indolence, loss of self-respect, and immorality. Natural defects, with which one would sympathise, should be candidly mentioned. Some have the misfortune to be deaf, short-sighted, lame, left-handed, delicate health, &c. These, if known beforehand, would often meet with due consideration, but if concealed until an engagement is entered upon are likely to lead to unpleasantness. We may add that, of the six cases mentioned above, the first only had passed the Preliminary.

Respectfully yours,

ARGUS & Co. (174/51.)

Fixing Without "Hypo."

SIR,—I asked you some time ago for a process for fixing without "hypo." My reason for doing so was on account of a man coming into the town offering for sale such a preparation. He wanted *only* 3*l.* 3*s.* for the recipe, and I understand more than one leading photographer bought it. I have since come across the recipe, which does, as you said, contain "hypo," and thinking chemists will hear of him in other towns, I beg to inclose it.

No. 1.

Sulphate of soda	..	..	..	10 oz.
Carbonate of soda	..	..	..	8 "
Water	..	..	..	80 "

No. 2.

Pyro	..	..	..	1 oz.
Nitric acid	..	..	..	10 gtt.
Water	..	..	..	80 oz.

Restrainer.

Bromide of potassium	..	..	..	60 gr.
Water	..	..	..	1 oz.

Fixer.

Hypo	..	..	..	1 lb.
Chrome alum	..	..	..	3 oz.
Water	..	..	..	80 "

N. S. (133/8.)

A Change in Lot. Hydrarg. Nig.

SIR,—Some time ago I noticed the lotio hydrarg. nig. which we keep ready mixed had turned a decided yellow colour, owing, as I thought, to the presence of perchloride in the calomel. This was thrown away. A fresh supply of calomel came in, but before again making the black wash the proper quantity of calomel was well washed with distilled water, to remove any traces of the perchloride that might be present, and I tested the solution for perchloride with iodide of potassium, but found none.

After a few days I again noticed that the black wash had gained a yellow colour, and on making inquiries of the wholesale house received the following in explanation concerning the decompositions that take place:—"Mercurous oxide is an unstable salt, and when exposed to light decomposes into mercuric oxide and the metal. In black wash the former oxide may be assisted in its decomposition into yellow or red oxide by some slight impurity in the lime-water. The presence of a sulphate or a salt of alumina is sometimes unavoidable."

Will you or any of your numerous readers kindly tell me if there is any other reason for the change?

Faithfully yours,

Holloway, N.

T. A. HEALE.

[We question if the presence of metallic contamination would have much influence in this case. The change is due mainly to oxidation. Lime-water, like ordinary water, generally contains some dissolved oxygen, which is sufficient to start oxidation, and exposure to light facilitates the decomposition spoken of by the wholesale house.]

Medical Practitioners and the Pharmacy Act.

SIR,—I cannot admit that your further statement of the opinion I have ventured to dispute makes your case any better. You appear to assume that there is some special virtue in the word "any" which allows you to extend the meaning of the title "chemist and druggist" beyond the limits assigned to it in section 3. I think that is an unwarrantable inference, for the word "any" does not appear to have any special significance. The clause speaks of "any pharmaceutical chemist." Now there can be but one kind of pharmaceutical chemist, for the title cannot be assumed by medical practitioners. It seems clear, therefore, that the mere insertion of the word "any" is accidental, and does not infer that the titles following are to be so extended in their meaning as to include persons who are not registered chemists and druggists.

You say there are no words in section 16 to justify my

reading of it, and that in construing a penal Act I may not read into a clause any words or expressions not actually therein contained. The latter statement is, I believe, good law; but are you not yourself trying to read into it the Amending Act of 1869? Had that Act contemplated the extension of the exemptions in section 16 to the executors of deceased medical practitioners, it would surely have said so.

But I am not attempting to read any additional words into section 16. I only seek the meaning of the words already there. I find there the words "pharmaceutical chemist," and "chemist and druggist." Everything depends on the meaning of these two titles. There is nothing in the section itself to show what they mean. I am, therefore, forced to refer to the Act of 1852 for the meaning of the former, and to section 3, Act 1868, for the meaning of the latter. I am also surely forced to take the view that, whenever the title "chemist and druggist" is used in any part of Act 1868, it can only have the meaning given to it in the defining section 3. The Amending Act of 1869 does not deal with section 16 in any way, and its original intent stands unaltered. I cannot see, therefore, how it can be argued that the exemption in clause 16 can be construed as contemplating anything but a chemist and druggist within the meaning of the Act. That is, not a medical practitioner who chooses to call himself a chemist and druggist, but only a duly registered chemist and druggist.

The question is of more importance than a mere nice point in abstract debate. It is bad enough to have businesses carried on indefinitely by the executors of deceased chemists, and it would be a very great misfortune to have the drug businesses of deceased medical practitioners put on the same footing. I do not see that the answer to what you say would be the question to decide would be an affirmative. It seems to me the answer would be, "No, be in business as a medical practitioner, and his medical diploma entitles him to practise as a chemist and druggist." That is to say, he is not in business as a chemist and druggist, but as a medical practitioner, and he uses the title as a medical practitioner.

I am, yours, &c.

Edinburgh, November 25.

PHARMACIST.

[Though we publish the above rejoinder out of respect for the writer, we do not see that our opinion expressed last week needs any modification. Of course an Amending Act must be "read into" the principal Act, but it is not equally justifiable to assume that a word which does not square with a preconceived idea has got into an Act by accident.—*Ed. C. & D.*]

Distilled Water.

Mr. W. A. Munro disputes the correctness of Mr. J. R. Hill's conclusions regarding the difficulty, or impossibility, of expelling all the gas from distilled water which has been charged with carbonic acid gas. Our correspondent states, "That if CO₂ be passed through neutral distilled water and litmus until it becomes acid, the blue colour *can* be restored on boiling—a fact which has been proved dozens of times, and I cannot conceive how the water Mr. Hill examined contained both iron and CO₂. Bicarbonate of iron is soluble in water; but when such a solution is boiled the iron is thrown down, either as carbonate or oxide of iron, or a mixture of both, and if it be filtered the filtrate will not show the most infinitesimal trace of either ferrous or ferric iron."

Horse Medicines.

A *Lincolnshire Chemist* (183/25) sends us the following: "I have for many years sold a large number of horse-balls and horse-powders made up from the recipes of horse-keepers, particularly at our November fair. In 1882 at this fair on one day I made and sold between 500 and 600 horse-balls, as well as making up numerous recipes for horse-powders. Since then the number sold has rapidly decreased, until this year I have not made up a single recipe. This proves, to a certain extent, the benefit horse-owners are deriving from the action the 'Lincolnshire Association for the Prevention of Horse-poisoning' has taken in several cases brought before their notice. I send the above thinking it may interest your readers, as I noticed a paragraph about the above association in your issue of November 16, page 684."

Black Spirit Varnish.

A good black varnish can be made from the following:—

Black sealing-wax	3 oz.
Shellac	1 "
Methylated spirit	12 "

or finely sifted ivory black may be added to the spirit varnish in the proportion of one in ten. Lampblack may also be used, but gives a coarser-grained surface when dry.

E. J. W. (183/24.)

Spirit black added to spirit varnish makes a perfect jet-black.

25 Hyde Park Road, Leeds.

J. W. HARDMAN.

Gas black (which may be obtained of artists' colourmen) ground up with 1 part spirit and 3 parts varnish makes a splendid jet varnish.

HEDER.

Green Lacquer for Metal.

Arsenic	
Blacksmith's forge scales	
Hydrochloric acid	

Equal parts by weight.

The metal to be well cleaned with washing soda, and then brushed over with the above, and put into water.

HEDER.

November Flora.

SIR,—As an instance of the mildness of the month of November, I noticed the following plants out in full bloom during the second week in the month in the neighbourhood of Hastings:—(*Ranunculaceæ*) *R. repens*, (*Caryophyllaceæ*) *Stellaria Holostea*, *S. media*, *Cerastium triviale*, (*Linaceæ*) *L. catharticum*, (*Leguminosæ*) *Ulex europæus*, (*Rosaceæ*) *Fragaria vesca*, *Rubus fruticosus*, (*Araliaceæ*) *Hedera Helix*, (*Rubiaceæ*) *Galium palustre*, *G. crectum*, (*Dipsacæ*) *Knautila arvensis*, (*Compositæ*) *Hieracium Pilosella*, *Taraxacum officinale*, *Serratula tinctoria*, *Carduus nutans*, *Centaurea nigra*, *Senecio vulgaris*, *S. crueifolius*, *Bellis perennis*, *Lapsana communis*, (*Campanulaceæ*) *C. rotundifolia*, *Phyteuma orbiculare*! (*Gentianaceæ*) *Chlora perfoliata*, (*Scrophulariaceæ*) *Veronica Burbaumii*, (*Labiatae*) *Galeopsis Tetrahit*, (*Boraginaceæ*) *Myosotis palustris*, (*Euphorbiaceæ*) *Mercurialis annua* (5 feet in height).

9 Sheldon Street, W.

Yours, &c.,

J. C. LLOYD.

Hire of Water-beds.

SIR,—I think the charges mentioned in your issue of today are very low—I may say ridiculously so. The Great Universal Provider charges 20s. for a month or part of a month. I have lent many during the last few years, and have always charged 20s. per month. If, after several months, they have been desirous of purchasing it, I have made some small allowance.

EUPHORBIIUM. (181/60.)

The Sale of Antipyrin.

SIR,—It seems to me the coroner and jury at Stockport are going outside their province in their remarks as to the dose of antipyrin and its sale. I would like them to know that any of their number could buy a 1-oz. tin at Whiteley's for 3s. 7d., and no questions would be asked as to whether they had weak heart or had at any time had the measles.

EUPHORBIIUM. (181/60.)

LEGAL QUERIES.

175/9. *Vides*.—You need not put a "Poison" label on medicine which you dispense if you label it with your own name and address, and make an entry of the ingredients in a book kept for that purpose, with the name and address of the purchaser. It is a question for your judgment and con-

science whether you should continue to supply the medicine without medical authority.

177/15. *Disheartened*.—There must be something wrong. Medicines are not liable to stamp duty unless some written or printed recommendation or claim can be shown. Verbal recommendations would not render them liable.

176/21. *Genera*.—We do not quite understand your question. You do not require a medicine licence if you only advertise formulæ, but you do if you sell compounds which are liable, either wholesale or retail. We do not know the formulæ of the articles you name.

179/30. *W. F. G.*—We should think the use of the title "dental chemist" by a person not registered as a dentist would be likely to involve him in an action. It is not certain how a court might regard it, but, as the combination of pharmacy and dentistry is very common, it is at least possible that this might be regarded as a title implying that the user is specially qualified to practise dentistry.

183/63. *A. P. S.*—The Apothecaries' Hall Dispensing Certificate is no qualification under the Pharmacy Act. It does not entitle you to sell poisons or keep open shop for selling them, or to call yourself a chemist and druggist. There are no means of overcoming the difficulty except by passing the Minor examination.

J. Wheelton.—The opinions of the law lords as to the seller of poisons were expressed in the case of the Pharmaceutical Society v. The London and Provincial Supply Association (Limited). You will find references to them in THE CHEMIST AND DRUGGIST for April and August, 1880.

184/36. *A. F. H.*—If a chemist's assistant takes a copy of prescriptions brought to his master's shop to be dispensed, and, subsequently setting up in business for himself, dispenses from those prescriptions, his conduct may not be chivalric, but we do not see how it could be punished by law.

184/3. *Rhei*.—None of the articles you name are poisons included in the schedule of the Pharmacy Act; consequently an unregistered person can sell or dispense them. (2) We think an unregistered person can legally poison a dog with prussic acid, and take a fee for doing so; but he may not sell the prussic acid for that purpose.

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

174/40. *Incompatible*.—(1) Eight minims of liq. apomorph. hydroch. for a dose as an expectorant is doubtless large, but should it be too large the patient will vomit, and that is not always an undesirable thing. Martindale's statement that the solubility of apomorphine hydrochlorate is 1 in 35 is pretty near the truth. You correctly followed the Pharmacopœia directions. (2) The proper thing to do in making mouth-lotions with tincture of myrrh is to add a little mucilage of acacia (say half as much as the tincture) to the water before pouring in the tincture. Tragacanth is of little use. A myrrh mouth-wash with the resin strained out would probably be as efficacious as one with it in, but good pharmacists would be horrified at such an innovation.

"A Little Nonsense."

SIR,—In a prescription where the directions read, "A teaspoonful three times a day immediately after food in water," is a dispenser justified in altering the sentence so as

to make it harmonise with his ideas of English composition?—"A teaspoonful in water three times a day, immediately after food." Doubtless you will have heard of the patient who, having been ordered to take his physic in water, was found standing in the river, calmly swallowing the prescribed dose.

Yours truly,

IVANHOE. (177/70.)

[We should not be inclined to encourage alterations in the syntax of directions, the intention in ninety-nine cases out of a hundred such instances as the above being obvious. For example, if we were to alter the direction at all, we might say, "A teaspoonful in water immediately after food, three times a day."]

Ferri Citras.

My experience does not coincide with the opinion expressed by you. Upon several occasions when this preparation was ordered I appealed to the prescribers, and in each instance they gave me to understand that ferri percitras was intended. In this and many other similar cases I found its use had been suggested by a zealous pharmacist who endeavours to steal a march over his neighbours by introducing various unofficial preparations as new remedies.

VERA DICE. (179/17.)

[Consequently "V. D.'s" experience constitutes an isolated instance, and not a general principle.]

A Hair Lotion.

SIR,—The following prescription was handed in a few days ago. Can you or any of your readers favour me with formulæ for the two first preparations?—

Infus. rorisamarin. fort. ..	..	..	..	3ij.
" flor. lavand. fort. ..	..	..	..	3ij.
Alcohol. ammoniat. ..	..	..	..	3iv.
Sp. vini. rect. ..	..	..	..	3iv.
Glycerin. pur. ..	..	..	..	3j.
Sacchar. ust. :	..	..	..	q.s.
Aq. dest. ad ..	..	..	..	3viij.

M.

Yours,

ERIOA. (179/18.)

Ipecacuanha Mixture.

SIR,—I have frequently occasion to make up the following, and find it gives a thickish precipitate:—

Vin. ipecac. ..	..	..	..	3j.
Spt. chloroformi ..	..	..	..	3j.
" ammon. arom. ..	..	..	..	3j.

M.

Can you inform me what it is and how it can be avoided? If it is the ipecacuanha that is deposited, then what is the use of the sherry in the wine if it cannot hold it?

NEWMAN'S SPECIFIC. (184/71.)

[The precipitate is not emetine, but mucilaginous and pectinous matter, which is insoluble in strong spirit.]

MISCELLANEOUS INQUIRIES.

Correspondents who have made inquiries regarding the following subjects will find the information in the numbers indicated.

179/56. *Per Ardua*.—Syrupus Picis, U.S.P.—The formula for this was given in our issue of April 6, page 496.

180/3. *B. U.*—Gelatin Capsules for Bottles.—See our last issue of September, page 480.

181/46. *W. T. B.*—Dentists' Modeling Wax.—See April 6, page 495, and our 1890 DIARY.

177/73. *Photo*.—To make Chloroplatinate of Potash, dissolve chloride of platinum in as small a quantity of water as possible and add to a saturated solution of potassium chloride. The chloroplatinate crystallises out, and may be dried on filtering-paper.

174/47. *Kudos*.—Cheap Baking Powder.—The following should suit your trade:—

	Lbs.
Acid sulphate of potash ..	.. 2½
Ground rice ..	.. 7
Bicarbonate of soda ..	.. 4

Mix.

Half an ounce of carbonate of ammonia in addition would be an advantage, no doubt, but not much.

176/3. *Nemo*.—Lotio Rubra.—3 grains of sulphate of zinc to the ounce. Colour with compound tincture of lavender.

176/70. *Cymro Dewr* has not complied with our regulations.

176/11. *A. P. S.*—Sulphate of magnesia is used as a bread improver. We are not aware of chloride of calcium being used for a similar purpose.

176/15. *T. L.* (New York).—The lozenge which you send is an ordinary red gum lozenge made with sugar instead of fruit paste. Red gum is obtained from *Eucalyptus rostrata*. It is used as an astringent. The lozenges are prescribed for relaxed sore throat. You can obtain them from the makers of medicinal lozenges who advertise in this journal.

177/20. *J. D.* (Paris).—You will find a formula for an emulsion, similar to the one you mention, in our issue of November 2, page 626.

177/56. *J. F.*—We should dry the damp pearlash in an oven and sell it.

175/34. *J. M.*—You should address your question to Mr. Baily, 26 Ethelbert Road, Margate.

177/64. *Jacques*.—A review of the book you name will appear shortly.

Santonin.—(1) We give the formulæ in the DIARY for 1890. (2) See the list of books, page 408, September 21.

177/60. *Nemo* (Stonehouse).—Ammonium fluoride and sulphuric acid are used for glass etching. The ammonium salt may also be used with fluoric acid.

177/64. *Jacques*.—All soluble essences of ginger become opaque when mixed with a certain proportion of water, but in the proportions generally used in making ginger ale they are quite clear. That applies also to the essence for which we give a formula on page 280 of last volume. Absolute solubility in water is clearly impossible in the case of substances such as the constituents of ginger.

177/62. *W. P.* of Manchester we do not happen to know, and he must be content to do without a formula for kid-reviver as long as he retains his anonymity.

178/10. *Paid*.—The ingredients in the prescription are:—Sodæ salicyl., vin. colchici., pot. ioid., tinct. gelsemin., tinct. cimicifug., tinct. chlorof. co., and inf. serpent.

179/21. *Vet.*—Unguentum Cantharidis, Vet. Pharm.:—

	Oz.
Cantharides in powder ..	.. 1
Prepared lard ..	.. 6

Digest the cantharides and lard together over a water-bath for three hours, with occasional stirring; while hot filter through paper, and allow the clear liquid to cool.

178/39. *Yankee*.—The chances of getting on in the drug trade in the United States are little better than they are here. The competition is just as great, and more message-boys become assistants or clerks than is the case here. Junior clerks get about \$10 a week.

178/60. *Sweet S.*—Our DIARY for 1890 contains a treatise on counter-prescribing, which meets a want that chemists generally have felt.

179/19. *Student* has made a Urea Estimation by acting upon 2.5 c.c. of urine with 12.5 c.c. of sodium hypobromite and measuring the gas in a grain-graduated burette, 180 grain measures being obtained. He now wishes us to make the calculation for him. We do not have time to spare, but "Student" can easily do it himself by converting the grains into c.c. and multiplying the product by 0.003409, which is the equivalent of 1 c.c. of nitrogen under normal conditions ($0.001256 \times \frac{32}{14}$). The answer multiplied by 40 gives the percentage of urea in the urine.

178/65. *J. H. W.*—We are not in a position to give you an opinion.

178/68. *Chairman*.—Ordinary size, made by dissolving glue in water, would be most suitable for applying to wood which absorbs varnish too readily. The size should be applied warm. A pound of glue to 3 gallons of water is a suitable strength. The coating should be allowed to dry before the varnish is applied, and any inequalities should be rubbed down with sand-paper.

178/45. *Indenture*.—We published an article on the legal aspects of apprenticeship on September 21. See also THE CHEMISTS' AND DRUGGISTS' DIARY, 1888.

J. H. Streater.—We gave reasonable opportunity for discussing Messrs. Elliman's conditions some time since, and we did, in fact, publish several letters showing both views of their innovation. We cannot keep the subject open indefinitely, and we think besides that, as they have adopted this scheme at considerable trouble to themselves, and with the object of assisting the retailers, those who disagree with their method might at least discuss it courteously.

178/40. *F. R. H. Heeley*.—Dragonsblood in Tears, or Socotrine dragonsblood—so called because it is believed to be produced in the island of Socotra—is occasionally offered for sale at the London drug auctions. The price for good tears, buying them in the wholesale way at the drug sales, is now, we should think, about 82s. 6d. to 85s. per cwt.; but if you only require retail lots you must, of course, expect to pay a reasonable advance. You can order through any wholesale drug firm advertising in this journal.

173/69. *W. A. W.*—Sullivan's Dental Cement.—This is a misnomer for a copper amalgam. It is made by precipitating copper from the sulphate by means of iron or zinc, well washing the copper, and mixing with the requisite amount of mercury: 3 parts of copper and 7 parts of mercury are good proportions. Dry the copper; then damp with nitrate of mercury solution; add the mercury, and mix under hot water. The great objection to amalgam filling of this kind is that it turns dark grey or nearly black on setting, and frequently stains the tooth.

175/5. *G. O.*—It is generally believed that all the Ammonium Carbonates on exposure to the air are changed to the acid carbonate NH_4HCO_3 , so that the change in the case of the official carbonate may be represented thus:— $\text{N}_3\text{H}_{11}\text{C}_2\text{O}_5 + \text{H}_2\text{O} = 2\text{NH}_4\text{HCO}_3 + \text{NH}_3$.

169/3. *F. P.*—Who is the maker of the face powder?

158/65. *J. E. M.* sends a sample of a Brass-cleaning Solution sold by an itinerant vendor, who charges 1s. a pint for it, and throws in a copy of the recipe, which is said to be:—Potass. cyanid., 3j.; cupri sulphat., 3j.; zinci sulph., 3j.; aq. ad Oj. The actual solution, a little of which has been sent to us, is anything but that. It contains $3\frac{1}{2}$ per cent. of nitric acid—say 1 oz. of the commercial acid to a pint—with a little metallic contamination (iron and zinc). Our correspondent speaks highly of the efficacy of the solution for scale-cleaning, but we cannot corroborate him. It is not more efficacious than a solution of oxalic acid.

170/53. *Cure for all Skin Diseases*.—Potassium sends us a sample of a solution which has this reputation. He says that it has been used with great success. We find that it is a 14-per-cent. aqueous solution of caustic potash. It will certainly remove the skin in many cases.

172/36. *Worcester*.—The colour for skins of polonies is one of the coal-tar colours. It seems to be very commonly used, and you should not have any difficulty in getting it matched by your wholesale house. The colour is also used in the aerated-water trade.

174/23. *Wilts*.—Blacking for Letters on Window Brass Plate.—If the letters are raised, first dip (or soak) in a solution of sulphate of copper, then in a hot solution of hyposulphite of soda. Dry and lacquer. Letters which are engraved in the plate are filled in with black or red sealing-wax.

Pill-decorating Machine.—H. will find full particulars of this machine, together with the names of the manufacturers, in our issue of August 24, page 268.

176/31. *Assayist*.—"The Manual of Assaying," by W. L. Brown (E. H. Sargent & Co., Chicago, \$2.50) is an excellent work. You may get it through such booksellers as Trübner and Sampson Low. The book will give you an idea of the knowledge required for an assayist who wishes to proceed to the Cape. The only course open to you for evening practice is at the Finsbury Technical Institute.

176/13. *G. B. B.*—Grease Balls.—We take the following formula from our DIARY for 1890:—

Sulphate of copper	1 drachm
Tartar emetic	$\frac{1}{2}$ "
Powdered white hellebore	10 grains
Nitrate of potash	2 drachms
Linseed meal	4 "

Make a ball. To be given at night.

133/8. *N. S.*—Gold Soldering.—Several liquids are used for preserving the surface. The commonest are:—(1) A solution of water-glass; (2) solution of zinc chloride, with 10 per cent. of ammonium chloride added; and (3) equal parts of syrupy phosphoric acid and methylated spirit.

183/71. *T. & C.*—Egg Julep.—Transparent soap, $\frac{1}{2}$ oz.; hay saffron, $\frac{1}{2}$ drachm; S.V.R., 1 pint; rose-water, 1 gallon. Cut the soap into shreds and boil it and the saffron in a pint of rose-water, strain, and add the rest of the water and the spirit as well as perfume. Set aside for a day or two and filter if necessary.

179/33. *A. O. A.*—Flour-mill Explosions may be due to the rapid combustion of the finely-divided flour diffused through the air, or to the ignition of a mixture of air with gases produced by the decomposition of the flour. The former is the common cause; and it arises from the stones striking so as to produce a spark which ignites a small portion of the flour dust, and the draught caused by the elevator promotes combustion throughout the whole of the mill, this being so sudden that an explosion results.

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ACID, GALLIC	Almost white needles	Freely and entirely soluble in alcohol or water
" PYROGALLIC	Bi-sublimed, white, bulky	Ditto ditto ditto.
" SALICYLIC (Kolbe's)	White, powder, crystallised and dialysed	Dissolves colourless in water or alcohol; purest for medicine.
" TANNIC	Lightest crystals	Dissolves almost colourless in water, alcohol, and ether.
" "	Powder and granulated	Dissolves freely in water, alcohol, and ether.
CELLOIDINE (Patent)	Gelatine plates... ..	Purest Pyroxylin; inexplusive.
CHLORAL HYDRATE	White cake and crystal	See Liebreich's, below.
CHLORAL HYDRATE (Liebreich's)	Transparent rhomboidals (facsimile of Dr. Liebreich's)	Will not decompose by age.
CROTON CHLORAL... ..	Shiny crystalline scales. (Powder form most objectionable)	Free from foreign chlorides.
GLYCERINE... ..	S.G. 1260, double distilled, brilliantly white, odourless; also lower S.G. and qualities	Free from lime, chlorides, metals; will stand severest chemical tests.
IODINE	Resublimed, fine scales	Purest.
IODOFORM, Absolut.	Crystals and powder of soft touch...	Purest; made by electrolysis.
PARALDEHYD ... ..	... ..	Absolutely purest.
POTASS. BROMIDE	Fine white dry regular crystals ...	Perfectly free from iodide and the most free from chloride.
" PERMANGANATE	Large and small crystals	Chemically pure.
" IODINE	Fine white dry regular crystals ...	Apply Barytic and other tests. This will never change colour.
SODA SALICYLATE, and other Salicylates	White powder and crystals	Freely soluble in water and alcohol.

H. FINZELBERG, of Andernach-on-Rhine.

ERGOTINE, pure Dialysed ...	Brown colloid, purified by Dialysis	Free from all saline matter present in the ordinary Ergotine and extracts.
FERRUM OXYD. (5% Dialysed,	Transparent brown liquid, purified by Dialysis	Free from all saline matter. Diluted by ten times its weight of water, will stand the test of Nitrate of Silver.
PEPSIN PORCI (100%)	White, sweet, odourless powder ...	Freely soluble in water, not hygroscopic, and will not deteriorate; will dissolve (by Wittstein's test) 100 parts of white of egg and 250 parts of fibrine.

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In Boxes, at 1/6 and 2/6. 14/- and 24/- per dozen.

Each Capsule equal to half a teaspoonful of Fluid Extract of Cascara Sagrada. The chief drawback to the use of this valuable drug, its unpleasant bitterness, is obviated when taken enclosed in Capsules.

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This concentrated preparation, carefully drawn in our own laboratory, is highly recommended, and daily finding increased favour with the trade for making Sp. Nitre, as required for use, thus avoiding the risk of loss of Nitrous Æther, and the development of free acid, both of which are almost certain to occur in Spts. Nitre which has been some time drawn.

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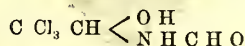
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CHLORALAMID.

THE NEW HYPNOTIC.

Discovered by Prof. Dr. von MERING, of Strassburg.



The following Extracts are from an exhaustive paper just published by Dr. D. R. Paterson (*Lancet*, October 26, 1889), and confirm in many respects the accounts published by Continental authorities:—

"With the view of testing the efficacy of the new remedy, I have given it in fourteen cases of insomnia, including simple sleeplessness and that resulting from phthisis, heart disease, enteric fever, &c. . . I may say here that several observations were made on the temperature, pulse, respiration, and urine, with a negative result. Taking first the results in simple insomnia, we have four cases in which the drug was given, two of them being above sixty years of age. In one instance—an old woman of sixty-four, who had not slept for some time, and used to spend the night sitting up in bed—30 gr. produced on consecutive nights, after an interval of from thirty to forty minutes, a tranquil sleep of eight and nine hours respectively. On both occasions there was some giddiness on awakening, while on the second morning, in addition, she felt sick, and remained drowsy during the forenoon. The dose being then reduced to 15 gr., sleep did not result on an average earlier than from half an hour to an hour and a half. It lasted, however, nearly eight hours, and was free from any of the former unpleasant after-effects:—in fact, after taking half-a-dozen doses, she stated her appetite was much better than it had been for some time. A man, sixty years of age, convalescent from an attack of jaundice, and complaining much of resting badly at night, received 30 gr. on several occasions. A sleep of eight hours, on an average, ensued in from forty to seventy-five minutes after administration. The sleep was unbroken, and very sound, and he declared it removed the dull headache from which he had been suffering. Here the drug was used on alternate evenings, and clearly showed its beneficial effects. In a woman, aged fifty, 30-gr. doses were followed by from seven to eight hours' sleep, and disappearance of paroxysmal cough, which was very troublesome. After the first dose there was next morning a feeling of sickness, but this, however, was not observed on any subsequent occasion. The fourth case was a man who had been carefully watched, and was absolutely sleepless for some days after his admission to hospital. Doses of 15 gr. to 30 gr. induced from two to four hours' rest on several occasions, and were sufficient to break, as it were, the sleepless habit. Its influence on the insomnia associated with phthisis, I found, on the whole, satisfactory. A night's rest of from six to seven hours frequently resulted from doses varying from 15 gr. to 40 gr.

"According to Hagen and Altler, chloralamide has in some cases no action on the insomnia of phthisis, while in others it produces considerable general malaise. The results obtained in two cases of heart disease were encouraging, and would compare favourably with those of any other hypnotic. Doses of 30 gr. in a man suffering from aneurism of the aorta gave fair rest, easing the pain and relieving the cough.

"Insomnia and restlessness resulting from pain were little, if at all, influenced by chloralamide. In two cases—one suffering from disease of the ankle with starting of the foot at night, and the other from dysentery with cramp-like pain in the abdomen—doses of 45 gr. caused, indeed, sleep, but which an attack of pain readily broke. From these few observations it would appear that the new hypnotic is not altogether free from some of the disadvantages attending those already in daily use. Doses of 30 gr. and 45 gr. have been followed by giddiness, feeling of sickness, dryness of the mouth, and even slight delirium—symptoms which, though not alarming, are certainly disagreeable, but which seem to be inseparable from the action of almost all our sleep-producing agents. A comparison of the action of chloral with that of the amide shows that the latter is not so rapid, sleep coming on half an hour to an hour after its administration; whereas after chloral it often results in fifteen minutes. This slight disadvantage, however, is more than compensated for by the almost entire absence of action which chloralamide has on the circulation."

DOSE.—Dr. Paterson has paid special attention to the dose of this substance, and says:—"Usually 30 gr. to 45 gr. suffice in the case of a man, while 20 gr. to 30 gr. will give satisfactory results in a woman. In experiments carried out by Alt, 60 gr. produced in two strong healthy women severe giddiness, symptoms of intoxication, with great excitement, and in one great nausea and retching. Chloralamide has no action on the digestive organs, and the appetite remains unimpaired. That this drug will be a valuable addition to our therapeutical armamentarium is undoubted."

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PRICE 10/6 PER POUND.

This preparation is a reliable and stable compound, and may be recommended as a soluble and palatable form of administering the new drug.

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(Contains 30 grs. in each fluid ounce).

COMPRESSED (Wyleys).

DOSE.—6 fluid drms. to 1½ oz. Price 3/6 per lb.

Each Pellet weighs 10 grs. Price 2/6 per ounce.

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It is the only known Drug which cures that most unpleasant of all maladies, viz., a HEADACHE. In cases of Gout and Indigestion it is indispensable.

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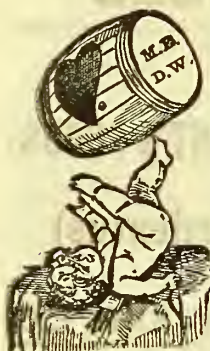
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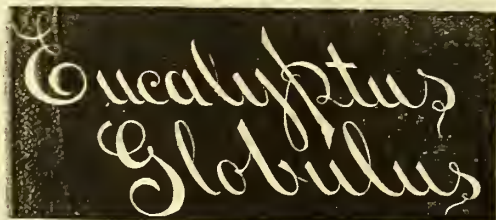
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LIQUID CHLORIDE OF METHYL, for the treatment
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THE SAFEST and MOST EFFECTUAL CURE for

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effect in reviving & restoring the exhausted energies of
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I am, Sir, Yours faithfully,
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Lecturer on Anatomy & Physiology
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THE RETAIL PRICE OF THIS WINE IS

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They are Nature's own Medicine, and contain neither drugs nor anodynes; may therefore be safely given even to children of tender age. Nobody old or young, should ever be without them, their effect being equally wonderful as a

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Sold in Boxes, 1s. 1½d., by all Chemists, and by the

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KOPTICA Is the Best, Cheapest, and Safest Remedy for Rheumatism, Neuralgia, Lumbago, Gout, Sciatica, and all kindred Diseases.

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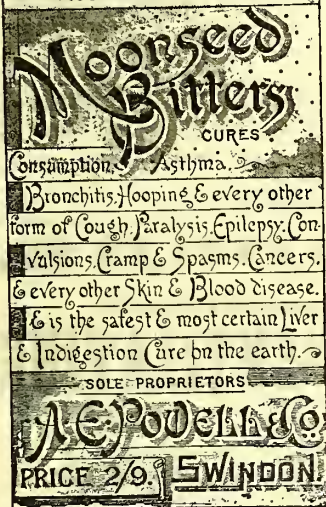
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Retails at 1/1½, 2/9, 4/6 per box.

Memorandum of Agreement made this.....day of..... 1889, between A. E. POWELL & COMPANY, of Swindon in the County of Wilts, Proprietors of the Moonseed Bitters and Moonseed Ointment (hereinafter called the "Vendors"), of the one part and of (hereinafter called "the Purchasers"), of the other part.

Whereby it is mutually agreed between the said parties hereto as follows:—

In consideration of the Vendors selling to and supplying the Purchasers with Moonseed Bitters, Moonseed Ointment, and other preparations manufactured and sold by them (hereinafter termed "the Goods") at their usual prices, the Purchasers will observe and perform the following terms and conditions:—

1. The Purchasers to sell the Goods retail for full printed prices only, and for each and every Bottle or Box of Moonseed Bitters, Ointment, or Pills sold by him or them at any less price, without the written consent of the Vendors, the Purchasers shall pay to the Vendors the Sum of Twenty Shillings in the nature of a penalty, to be recoverable as ascertained liquidated damages.

2. The Purchasers not to supply any Wholesale House nor to sell the Goods wholesale to any Chemist or Druggist or Medicine Vendor who will not previously enter into an Agreement to retail the same at prices in accordance with the preceding Clause No. 1 of these presents.

All Purchasers who have signed a similar form of Agreement to the foregoing will be supplied upon the Vendors' usual trade terms, but those Purchasers who do not sign a similar form of Agreement to be supplied upon the following terms only, namely:—RETAIL, 4s. 5d. for each and every 4s. 6d. Box or Bottle, 2s. 8d. for each and every 2s. 9d. Box or Bottle, and 1s. 0½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. WHOLESALE, 4s. 4d. for each and every 4s. 6d. Box and Bottle, 2s. 7d. for each and every 2s. 9d. Box or Bottle, and 11½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. This Agreement and the terms and conditions herein contained to remain in full force and virtue for the term of 7 years from the first day of March, 1889.

As witness the hands of the said parties hereto the day and year first above written.

We call attention to the important steps which we have taken to prevent our specialities being retailed at less than the advertised prices, and we ask the co-operation of the Trade in maintaining the integrity of the scheme whereby the sale of our preparations may always be retained by the legitimate trade. We will not only endeavour, by all means in our power, to prevent the advertised prices being "Cut," but will give Chemists every assistance and facility for making this a large as well as a paying business.

Please write for Terms and Form of Agreement. NOTE that we allow retailers of Moonseed Bitters 2s. 6d. per thousand for the Distribution of Pamphlets.

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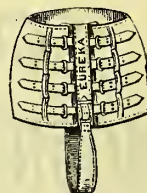


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Chemists are requested to abstain from Purchasing
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FELT SPECIALITIES.**



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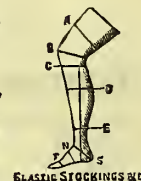
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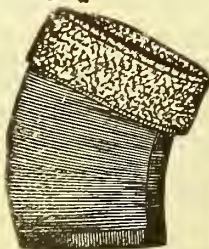
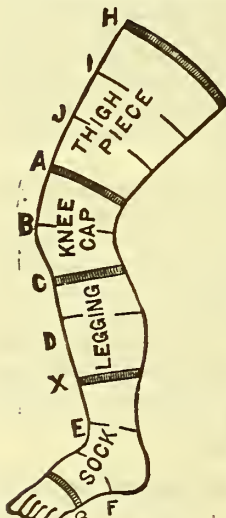
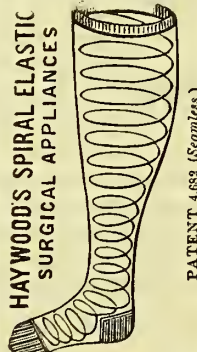
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Natural Wool.



Patent Pile, Protected,
14,618. The Pile lying
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Cords, protecting them
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surface to the limb.

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Hot Water Bottles and Covers. Respirators Inhalers, Bronchitis Kettles Throat Spray
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Are going splendidly this season. Only require to be shown—they sell themselves. 4/ per doz., in 1 doz. Boxes, or 3 doz. Glass-top Counter Case.

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Best make. A large assortment. Yield big profit to the Chemist. Worth pushing. A handsome Gold-labelled Mahogany Window Display Case given away with 3 dozen selected from the following:—

Nos.	2	3	4	5	6	7	8	8½	9	10	11	12
Retail	2/	2/6	3/	3/6	4/	5/	6/	2/6	3/6	4/	4/6	5/ each.
Wholesale...	14/	18/	21/	24/	30/	36/	42/	18/	24/	30/	33/	36/ doz.

Nos. 8½, 9, 10, 11, 12 are Ladies'.

All the above can be ordered from our Wholesale friends in England, Ireland, Scotland, and the Colonies, or from Messrs. EDWARDS & S N, Queen Victoria Street, LONDON, E.C.

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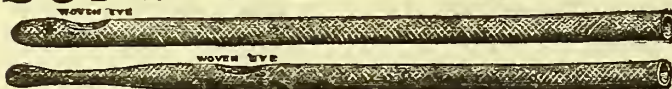
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These Pills are now prepared by the Proprietor, E. T. TOWLE, CHEMIST, NOTTINGHAM, to whom all orders, communications, &c., should be addressed. Prices and terms on application.

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In ONE WEEK three curious uses were reported for which "THE LEICESTER" IMPROVED ADHESIVE PLASTER, *On Fine Flesh-coloured Cambric*, is found the best, after trying other makes (in the first case, nearly every known plaster). A well-known actor said he had the good fortune to meet with it in the South of England, and had inquired for it wherever he went since. It is the only plaster he can find to answer for fixing false hair, &c. A chemist in the North wrote and said a lady violinist would have nothing else; she uses it to make a pad to protect her fingers. A chemist in Yorkshire has a customer who uses plaster to keep his eyes open, and nothing will hold the lids up so well as "The Leicester" Improved Adhesive Plaster on Fine Flesh-coloured Cambric. Surgeons in all parts are frequently commending it. The Sale rapidly increases.

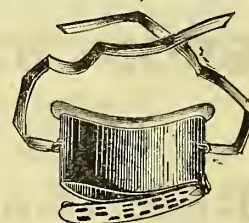
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For the rapid cure of diseases
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New method of curing diseases of the Eye
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2d. " " " "	8/6	6d. LUMP, Square Boxes ...	36/0
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which will be found, on comparison, not to be equalled.*

The subjoined are two out of many unsolicited testimonials—


MR. HARTLEY, Chemist, Westbourne Square, W., writes:—"I don't know any Fuller's Earth on the market so attractively got up."

MESSRS. FULLER & CO., Chemists, Norwich, say:—"We received your samples, and are very pleased with them; please send enclosed order."

LEWIS VIGIS, BATH.

WHOLESALE AGENTS—

BAISS BROS. & CO., 4 JEWRY STREET, E.C.; BARCLAY & SONS, LIMITED, 95 FARRINGTON STREET, E.C.

PERFUME SPRINKLERS,HAIR WASHES, CREAMS,
OILS, INKS,
&c.ALSO FOR 

MANUFACTURERS:

H. G. SANDERS & SON,

Victoria Works, Victoria Gardens, Notting Hill Gate, LONDON, W.

Established 1820.

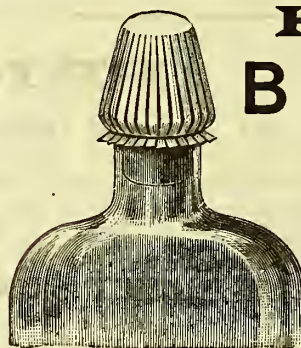
Telegraphic Address: "COLLAPSIBLE LONDON"

DISPENSING BOTTLES & PHIALSWE NOW SUPPLY OUR CELEBRATED
6 and 8 oz. Bottles at 7/6 per gross.
8 ,, 4 oz. ditto 6/6 ,,

All other Sizes and Kinds equally low.

I. ISAACS & CO.GLASS BOTTLE MANUFACTURERS,
25 Francis St., Tottenham Court Road, London, W.C.

Established upwards of 50 years. Bankers: London and Westminster Bank.

**HUNT'S
BOTTLE
CAPS**Pleated Paper, from 8d.
per Gross.

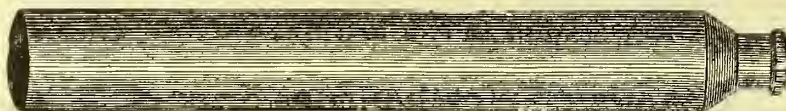
LONDON:

25 Great Windmill St., W.

Depôt of DIGNIE'S ENZYMES.

H. BROOKS, PEEL & CO. [
COLLAPSIBLE TUBE MANUFACTURERS,ESTAB.
1810.Patentees and Sole Manufacturers of the PORTABLE METAL SPRINKLER STOPPER, and Dealers in GLASS BOTTLES
FOR PERFUMERS AND OTHERS.

Steam Factories: 31 Lyme Street, Camden Road (Offices), and Bartholomew Road, Kentish Town, London, N.W.

**COLLAPSIBLE TUBES
OF ALL SIZES.**For Perfumes, Artists' Colours, Soaps, Cosmetics,
Creams, Oils, Varnishes, &c. These Tubes are
inexpensive and portable, and may be applied to
many useful purposes besides those above men-
tioned.

SOLE MANUFACTURERS AND PATENTEES OF

THE PORTABLE METAL SPRINKLER STOPPER,

With Cork fitted thereon for bottles of any size, and having apertures of various dimensions, especially adapted for Perfumes, Hair Washes, Lime and Glycerine Essences, &c. These handsome stoppers give a character and finish to the most ordinary bottles to which they may be applied. Gilt or plain; and put up if required in handsome glass lid boxes, suitable for shop counters and show cases, at moderate prices.

THE "TORSION" PATENT SPRINKLER

The two designs, Nos. 18A and 19A, are those to which we direct special attention, as sizes being in general use: other sizes will follow promptly to meet all requirements, on which Caps with two or more holes will be introduced to meet the public taste.

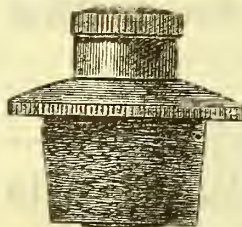
Particular attention is called to the latest improvement in our Patent Metallic Stopper, the "Torsion."

This New Stopper adheres to the design of the original patent, which has been universally acknowledged as an ornamental and inexpensive article for the Toilette, as possessing all the advantages of a "Permanent and Indestructible Stopper, suitable for Bottles of all Sizes and Shapes," with the additional security it affords, that the Cap can never be entirely unscrewed, consequently it cannot be lost. It is specially effective as a Sprinkler, while giving a more prompt and copious, yet economic, supply, through the improved action of the Cap. Such combined advantages, in an article of exquisite finish, have long been desired, and it is thus submitted for general approval, and its usefulness when tried will be appreciated by all.

Illustrations, Price Lists, &c., can be had on application, or through any Wholesale House in town or country. All orders received direct will be promptly attended to.

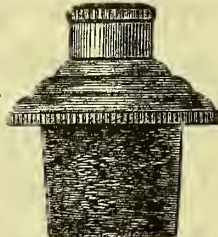
CAUTION.—All Stoppers of our Manufacture are made of Pure Tin, and have the name of H. BROOKS & CO stamped on the under side of the rim.

All Tubes are made of Pure Tin unless specially ordered of Mixed Metal, from the smallest size up to 13 in. by 2½.



No. 1

50



No. 18A



"LOOK AFTER THE PENCE" IN BUYING

The following Winter Specialties we ask the attention of the Trade to, and a comparison of our Prices before placing their orders.

CHEST PROTECTORS,

BEST QUALITY FELT.

Red or White. Nos. 1 2 3 4 5
SINGLE ... 5/6 7/6 9/ 11/3 15/ doz.
DOUBLE ... 12/ 16/ 21/ 26/ 34/9 ,,
Perforated Chamois Leather and Flannel at equally low quotations.

RESPIRATORS.

No. 702/c. Cork Respirators ... 5/6 doz.
,, 702. Perforated Silver Plated ... 7/ ,,
,, 703. Silver Plated Gauze, two thicknesses ... 10/9 ,,
,, 704. Double Plated Gauze and perforated plate above ... 16/ ,,
,, 705. Ditto, ditto, below ... 16/ ,,
,, 706. Gold Plated Gauze and perforated plate above ... 23/ ,,
,, 707. Ditto, ditto, below ... 23/ ,,

All Nos. except 702/c. each in glass top box.

EXTRACT OF MALT.

Carefully prepared in vacuo and of great diastatic power.

1-lb. bottles... 9/6 doz.

$\frac{1}{2}$ -lb. ,, ... 6/6 ,,

EXTRACT OF MALT AND COD LIVER OIL.

1-lb. bottles ... 10/ doz.

$\frac{1}{2}$ -lb ,, ... 7/ ,,

Plain labels, or 6 dozen assorted with buyer's own name on.

THE BRONCHIAL "INHALER"

(REGISTERED.)



A PERFECT INHALER, EQUAL TO NELSON'S
8/6 per dozen.

The best and most effective small Inhaler made.

CAMPBOR ROLLS.

Beautifully white, and will not become rancid.

1d. size, $\frac{1}{2}$ -gross in glass top box ... 5/6 gross.

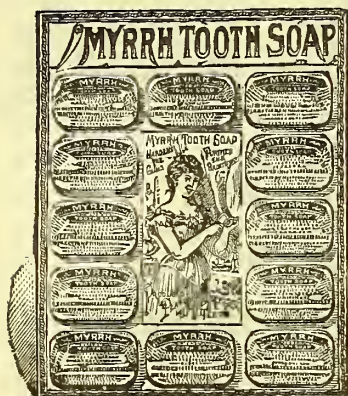
2d. size, $\frac{1}{4}$ -gross ,, ,, ... 11/ ,,

Special Prices to Large Buyers.

Terms—Net, One Month.

HOCKIN, WILSON & CO.

13 to 16 NEW INN YARD, 186a TOTTENHAM COURT ROAD, LONDON, W.



WRIGHT'S MYRRH TOOTH SOAP.

The Most Elegant Dentifrice on the Market.

REMOVES TARTAR. PRESERVES THE ENAMEL. PREVENTS DECAY.
GIVES PEARLY WHITE TEETH. HARDENS & STRENGTHENS
THE GUMS. CURES OFFENSIVE BREATH. A GEM FOR THE TOILET.

Put up in an attractive manner for show case display, and contains in a modified form the medicinal properties of Myrrh. It is an elegant saponaceous Dentifrice, absolutely pure, containing no mineral or acid substance, and no ingredient entering into its composition is in the least degree harmful or unwholesome.

ENDORSED BY THE HIGHEST DENTAL AUTHORITIES.

A Professor of Clinical Surgery in the Dental College at the Michigan State University says:
GENTLEMEN—I am satisfied from a careful examination of your Myrrh Tooth Soap that it contains nothing injurious to the Teeth. I am using it, and consider it a most excellent dentifrice.—J. A. WATLING, D.D.S., Ann Arbor, Mich., U.S.A., March, 1886.

Professor J. TAFT, of the Cincinnati, Ohio, U.S.A., and Michigan, U.S.A., Dental Colleges, and also author of "Tait's Operative Dentistry," and editor of the "Dental Review," states: I have used your Myrrh Tooth Soap for several months, and am free to say that I am much pleased with it. So far as I know it has no superior if an equal, in the preparations of this kind. To none of the materials used in its composition can any objection be made; indeed, they are the materials largely used in the preparation of dentifrices generally. You have certainly succeeded in producing a most excellent dental soap. Yours very truly, J. TAFT.

PRICE EIGHT SHILLINGS PER DOZEN.

Can be obtained of

H. A. GOODALL & CO., Bartlett's Buildings, Holborn Circus, London, E C

R C TREATT

Dunster House Mincing Lane

LONDON

IMPORTER OF

Musk Civet Ambergris Attar - of - Rose

ESSENTIAL OILS



Wholesale
and
Export
only.

APPLICATION.

ON

QUOTATIONS

AND

PRICE LIST

HOPGOOD & CO'S

HAIR

NUTRITIVE & SEDATIVE

CREAM

The only preparation for the Hair recommended by leading Physicians for the removal of Scurf, allaying irritation, preventing greyness and baldness, and producing a

LUXURIANT HEAD OF HAIR.

In Bottles to retail at 1s. 6d., 2s., 2s. 6d., 3s. 6d., 5s.
Revised Wholesale Prices, 12s. 6d., 16s. 6d., 20s., 30s., and 42s. per dozen
Supplied by all Wholesale Sundry Houses,

OR FROM THE DEPOT—

OSBORNE, GARRETT & CO., 51 Frith St., Soho, London, W.

THE NURSERY, THE SICK ROOM, THE TOILET



THE ARIEL

POWDER PUFF.

(MARY WEDLAKE'S PATENT.)

IS a New Invention by which the Powder is contained in the Puff, and from which it is distributed in such a manner as to secure an even dispersion wherever directed. The Ariel Powder Puff never touches the skin, and, therefore, risk from contagion is impossible.

It may be carried in the pocket, always ready for use.

R. FARBAR, House Surgeon, St. Bartholomew's Hospital, writes:—"It is simple, ingenious, and effective."
Dr. G. E. YARROW, City of London Lying-in Hospital, writes:—"It possesses distinct advantages over the old form, amongst the most important of which is, that by its use powder is delivered on parts which are with difficulty reached by the ordinary puff."

Price 8s. and 11s. 6d. per dozen.

Of all Wholesale Houses, and of the Patentees direct.

M. WEDLAKE, 8 Berkley Rd., Regent's Park, London.

58

"Cream of Magnolia."

MATCHLESS FOR THE COMPLEXION.

A Marvellous and Unique Preparation for Softening, Toning, and Beautifying the Skin.

INVALUABLE for removing Spots, Sunburns, Blotches and all Imperfections.

IMPARTS A VELVETY SOFTNESS AND BLOOM.

Renders it Beautiful to the Eye, and deliciously soft to the Touch. Can be used with the most perfect safety to any child or infant.

In Bottles, post free, 2s. 6d., 4s., 7s., and 10s. 6d., or Sample Bottles, post free, 1s. 3d., direct from the Proprietor,

JOHN STEEDMAN,

47 FULHAM ROAD, LONDON, S.W.

ESTABLISHED 1836.

Ladies once using this Preparation will never be without it.

BRODIE'S IMPERIAL HAIRDYE.

(REGISTERED.)

ONE LIQUID. — Harmless, Perfect, Permanent, and Odourless. Clear, and without Sediment.

Guaranteed to contain no lead, or any other noxious ingredient.

BLACK, BROWN, LIGHT BROWN, OR GOLDEN.

TRADE PRICE LIST:—

No.	1s. Od. size	7s. Od. per doz. Nett
No. 1.	1s. Od.	17s. 6d.
No. 2.	2s. 6d.	24s. 6d.
No. 3.	3s. 6d.	35s. 0d.
No. 4.	5s. 0d.	73s. 6d.
No. 5.	10s. 6d.	

J. BRODIE, 41 Museum Street, **LONDON, W.C.**

CHRISTMAS PRESENTS.

HIGHEST AWARD AND MEDAL, 1888.
SPECIAL AWARD & GOLD MEDAL, 1889.

PETAL DUST.

The Great Floral Air Purifier
and Everlasting Perfume.

PETAL DUST

has secured the HIGHEST AWARD wherever exhibited,
and the Sale of nearly One Million packets within the last
few years bears good proof as to its popularity with the
public.

CHEMISTS will find PETAL DUST the best selling line for the Christmas Season
Hundreds of Testimonials have been received.

PRICES.

3d. Size, in Boxes containing 3 dozen	6s. 0d. per box	} Net
6d. " " 1 "	...	...	...	...	3s. 6d. "
1s. " " 1 "	...	...	...	...	7s. 0d. "

Order through your Wholesale House, or, CASH WITH ORDER, direct from SOLE PROPRIETORS—

THE ROSMARINE MANUFACTURING CO., LONDON AND PHILADELPHIA.

LONDON OFFICE—54 STAMFORD STREET, LONDON, S.E.

CITY DEPOT—H. C. QUELCH, 19 LUDGATE HILL, LONDON, E.C.

H. P. TRUEFITT'S SPECIALITIES FOR THE HAIR.

Floral Extract, 3/6, 5/-,
10/6, 21/-

Egg Yulep, 2/-, 4/-

CONCENTRATED

Egg Yulep, 2/6,

5/-, 10/6.

Golden Fluid,

10/6, 21/-

EUXURON,

1/6.

&c.

Stimulating Lotion, 5/-
10/6.

Astringent and Tonic

Lotion, 5/-, 10/6.

Quinine and Arnica

Hair Wash, 3/6,

5/-, 10/6, 21/-

Arnica Wash,

3/6, 5/-,

10/6.

&c.

EUCHRISMA.
Combines in one clear Fluid every valuable
Component both of a Hair Grease and Wash.
3/6, 5/-, 10/6, 21/-.

EAU RACINE.
For restoring the original colour of Gray Hair;
superior to all other Restorers, being perfectly
simple in its Components. Price 6/-.

An elegant Preparation for
the Hair and Beard.
Price 2/6, 3/6, 5/-, 10/6, 21/-.

BRILLANTINE.

H. P. TRUEFITT'S TONIC TOOTH BRUSH

(BY ROYAL LETTERS PATENT.)

PRICE ONE SHILLING.

20 & 21 Burlington Arcade; 13 & 14 Old Bond St., London.

GREENSILL'S THE ORIGINAL

When

ordering

from

MONA

AND ONLY

GENUINE.

Wholesale Houses

please specify

"GREENSILL'S."

BOUQUET

SOLE MANUFACTURERS—

T. S. GREENSILL & SON

LOCH PARADE,

DOUGLAS, ISLE OF MAN.

NOTICE.

E. A. HEARN & CO.

WHOLESALE AND EXPORT GLASS BOTTLE MANUFACTURERS,

Respectfully beg to inform their Customers and Friends that they have completed, and are now working their NEW and EXTENSIVE GLASS WORKS at Lea Bridge, Clapton, London, E. The Furnaces are built in the LATEST STYLE, and fitted with EVERY MODERN IMPROVEMENT. Large orders can now be executed at a few days' notice.

Until further notice all communications should be sent as usual to

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**GLASS
BOTTLES**

OF THE

BEST QUALITY.

DISPENSING, PICKLE, SAUCE, OIL,
MINERAL WATERS, &c., &c.

SAMPLES AND PRICES ON APPLICATION.

E. YOULDON,

EAST LONDON GLASS BOTTLE WAREHOUSE
36 to 40 Great Garden Street, Whitechapel,
LONDON, E.



CARTER'S DISINTEGRATORS

Will Pulverise, Granulate, or Shred almost any Mineral, Vegetable, or Animal Substance.

NEARLY 1,300 IN USE

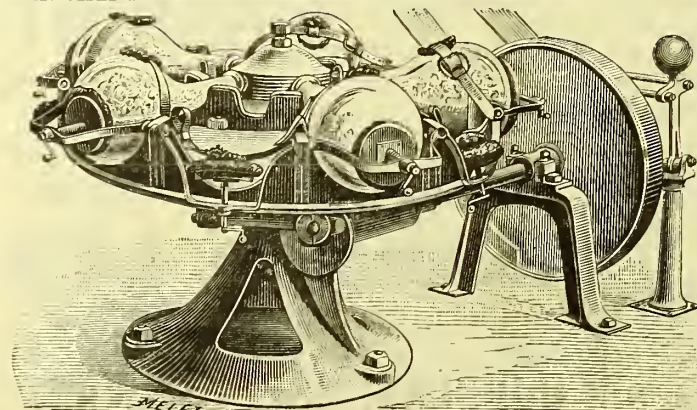
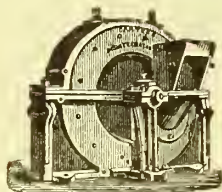
IN ALL PARTS OF THE WORLD.

For Grinding Sugar, Bark, Linseed, Ginger, Pepper, Spices, Salt, &c., this Machine is invaluable. Made in 9 Sizes. Illustrated Catalogue may be obtained on application.

Samples of ANY Material will be Ground free of charge.

J. HARRISON CARTER, 82 Mark Lane, LONDON, and 3 Rue du Louvre, PARIS

Telegraphic Address—Milling London.



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BEYER FRÈRES,

**16 & 18 RUE DE LORRAINE,
PARIS.**

2 GOLD MEDALS PARIS EXHIBITION, 1889.

NEW AGITATING MACHINE

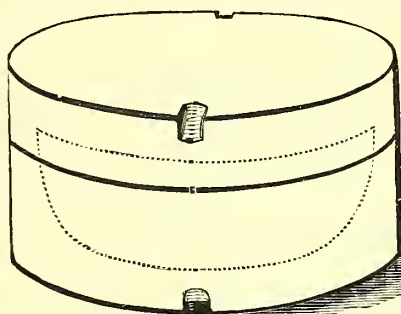
For macerating and exhausting raw materials in infusion with alcohol, producing 150,000 movements per day in each metal receptacle, with a minimum of force. A considerable economy of time, labour, and capital is obtained in infusing musk, amber, benjamin, civitte, iris, grains, powders, or pharmaceutical products treated with liquids or ether.

These machines are made for 10 or 15 bottles, each containing about 15 litres, as required.

WILLIAM TOOGOOD'S WAREHOUSE AND SHOW ROOM, BURLINGTON BUILDINGS, HEDDON STREET, REGENT STREET, LONDON, W.

TOOGOOD'S IMPROVED PATENT EARTHENWARE COVERED POTS

Are claimed to be the most
perfect and convenient yet offered to
the Trade.



*Owing to the increasing demand
for our Patent Pots, we have in-
troduced a Special THIN Series
for Dispensing.*

*These Pots are beautifully
glazed and finished, and, being
very light, are specially adapted
for sending by post.*

ORDINARY THICKNESS—

1 dr.	2 dr.	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$	2	3	4	6	8	ounces.
$\frac{1}{8}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{7}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{2}{2}$	$\frac{2}{10}$	$\frac{3}{4}$	$\frac{4}{6}$	$\frac{5}{6}$	per doz.

THIN FOR DISPENSING—

$\frac{1}{7}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{1}{2}$	$\frac{2}{4}$	$\frac{3}{3}$	$\frac{4}{3}$	$\frac{5}{5}$	$\frac{6}{6}$	ounces.
			2/-	2/4	3/-	3/8	5/-	6/-	per doz.

Forwarded Free to all parts of the World on application, enclosing business card.

WILLIAM TOOGOOD'S NEW ILLUSTRATED PRICE CURRENT

OF

Glass Bottles, Glassware, Earthenware,
Apparatus, Implements, and Utensils,
FOR THE USE OF CHEMISTS AND DRUGGISTS.

DRUGGISTS' SUNDRIES OF ALL KINDS.

Colonial and Foreign Enquiries and Correspondence solicited.



R. H. BARRETT,

Flint Glass Bottle Works,
THE OVAL, CAMBRIDGE HEATH, LONDON, E.

For Beauty, Cheapness, and Efficiency R. H. BARRETT'S

WATCH SMELLING-SALT BOTTLES

EXCEL ALL OTHERS IN THE MARKET.

The Caps are all fitted with **INDESTRUCTIBLE WASHERS**, to resist the action of Ammonia and retain the strength of the Salts.

Price, assorted white and coloured, 10/6 per gross (in 5-gross lots).

Chemists' and Perfumers' Bottles in great variety, Plain or Stopped.

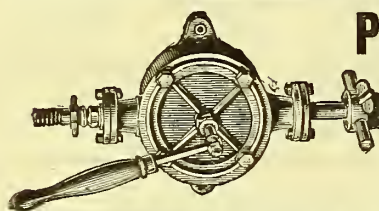
Telegraphic Address—"FOREFRONT LONDON." [1]

CHEMISTS' SHOP FITTINGS, SHOW CASES, &c.

FOR BEST WORK AT LOW PRICES SEND TO

G. TREBLE & CO., 2 KINGSLAND GREEN, DALSTON, LONDON.

PLANS AND ESTIMATES FREE. SPECIAL ATTENTION PAID TO EXPORT ORDERS.



PONTIFEX & WOOD, LD., Farringdon Works, LONDON, E.C.

THE "FARRINGDON" PATENT PUMP,

FOR PUMPING

OILS, WINES, & OTHER LIQUIDS FROM CASKS, &c.

The "Farringdon" Patent Pump, with Improved Taper Barrel attachment. It is easy to work and simple in construction, and is admitted to be the best article in the market for pumping Paraffin Oil and all kinds of Liquid from barrels or tanks into other receptacles.

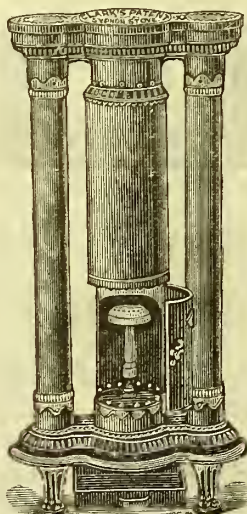
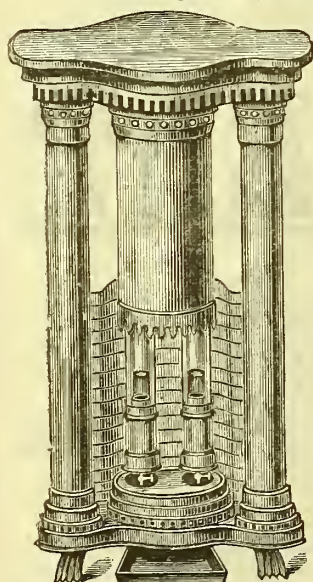
TO CHEMISTS AND DRUGGISTS.

AGENTS WANTED FOR THE SALE OF CLARK'S PATENT

"SYPHON" (REGISTERED TITLE) **HYGIENIC CONDENSING GAS HEATING-STOVES.**

NO FLUE REQUIRED. ARE FREE FROM SMELL OR SMOKE.

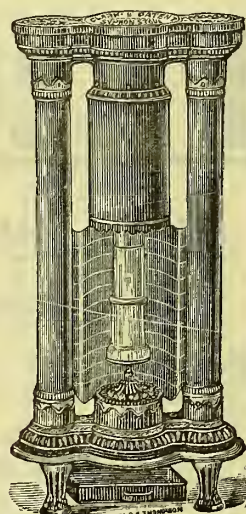
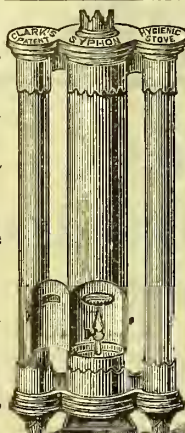
All injurious vapours are reduced to harmless liquid inside the Stove, and passed out at foot into a tray provided for that purpose.



For Use in Hospitals, Sick Chambers, Bedrooms, Halls, Conservatories, Churches, Schools, &c.

Specially suitable for patients suffering from Bronchial affections, as a moist atmosphere is obtainable when required.

For Terms, Particulars, and Prices, apply to



S. CLARK & CO., Patentees and Makers, Syphon Works, Park Street, ISLINGTON, LONDON, N.

Telegraphic Address—"SYPHON STOVES LONDON." Wholesale Agents—Messrs. MAW, SON & THOMPSON, Aldersgate Street, London, E.C.



PHILADELPHIA, 1876.

PRIZE MEDALS. INTERNATIONAL EXHIBITIONS.



MELBOURNE, 1880.



SYDNEY, 1879.

KILNER BROTHERS

GLASS BOTTLE MANUFACTURERS.

No. 3^A GREAT NORTHERN GOODS STATION, KING'S CROSS, LONDON.



PARIS, 1878.

Telegraphic Address:

"BOTTLES LONDON."



LONDON, 1862.

Telephone

No. 7509.



PARIS, 1875.

EXCELLENT
QUALITY.

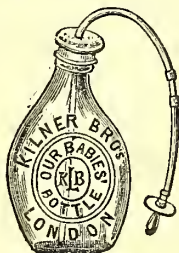
EXTENSIVE
VARIETY.

PRICES LOW,



Dispensing.

FIRST ORDER OF MERIT,
GOLD MEDAL,
MELBOURNE, 1888.



Feeding.

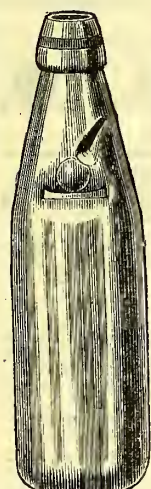


Dispensing.

QUOTATIONS
AND
SAMPLES SENT
ON
APPLICATION,

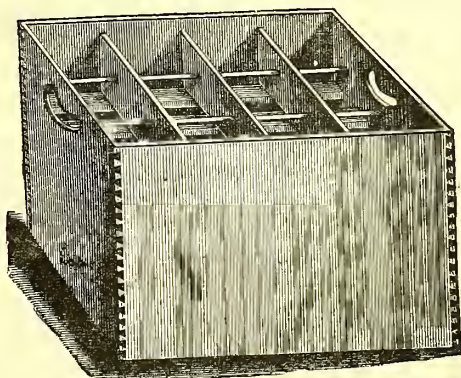
FEEDING, PICKLE,
DRUG, OIL,
SAUCE, VINEGAR
BOTTLES.

WINE, SPIRIT,
BEER,
CONFECTIONERY
BOTTLES.

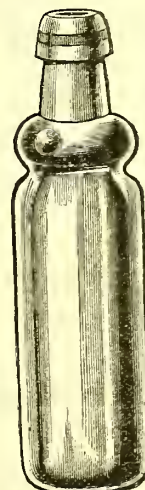


Mineral Water
BOTTLES.

VAN BOXES.



CASES.



Mineral Water
BOTTLES.

A. ATTWOOD & CO.

ARE BONA-FIDE
MANUFACTURERS OF

LIFTS AND HOISTS.

WORKING BY
Gas-Engine,
Steam-Engine,
Hydraulic, or Hand
Power.

FOR
Passengers,
Goods,
Luggage,
Dinners, &c.

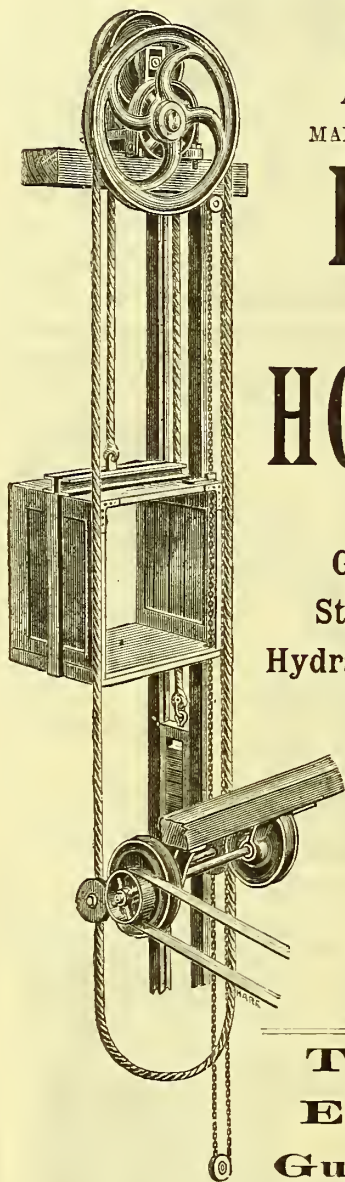
Thorough
Efficiency
Guaranteed.

CONTRACTORS TO H.M. WAR OFFICE
AND COLONIAL GOVERNMENTS.

Canal Head Foundry and Engineering
Works,

ULVERSTON.

London Office. — 3 GRACECHURCH ST., E.C.
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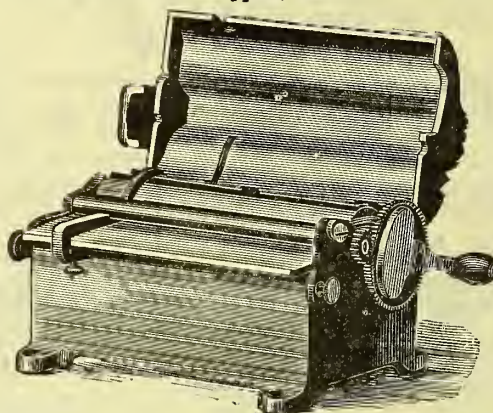
JOHN HOLROYD & CO., LIM.

Engineers, Tool Makers, and Machinists,
TOMLINSON ST. WORKS, HULME,
MANCHESTER.

**MACHINES FOR MAKING
COMPRESSED TABLETS.**

MACHINES FOR GUMMING

Either an entire surface or the edge only of Labels,
Wrappers, &c.



Machines Built to Contract for Inventors and
Merchants.

STOKES' PATENT CHECK TILL SYSTEM

HAS

SIX ADVANTAGES

UNKNOWN IN ANY OTHER TILL SYSTEM.

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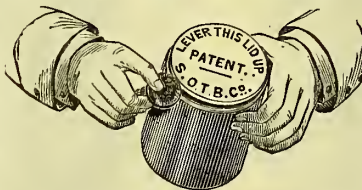
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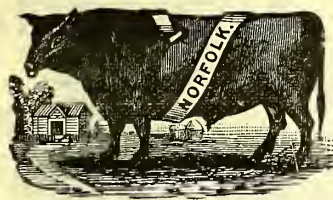
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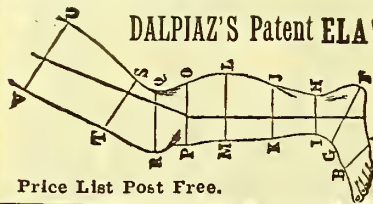
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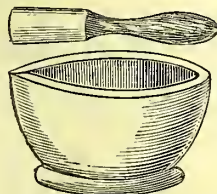
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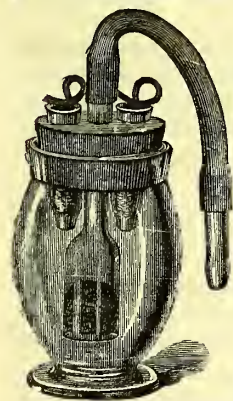
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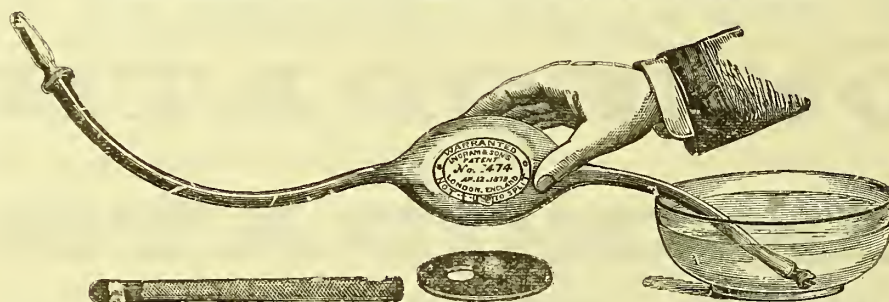
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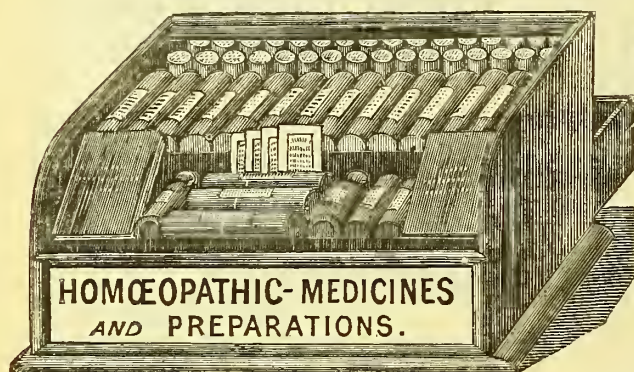
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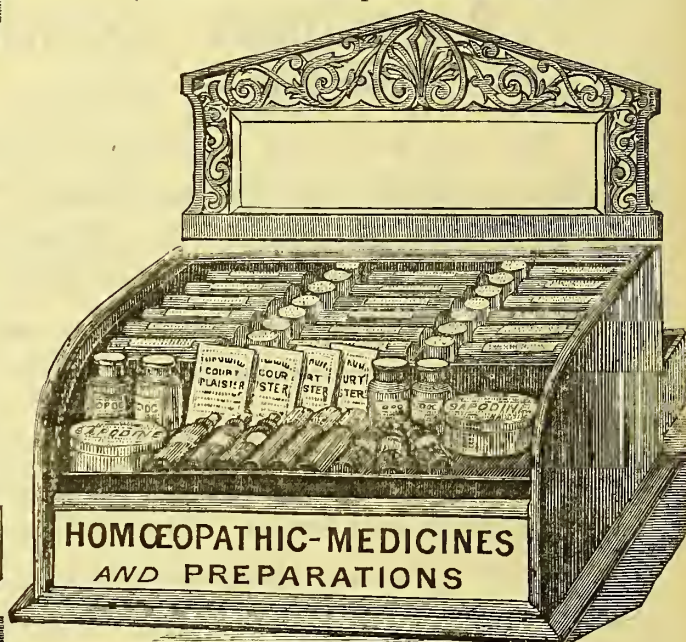
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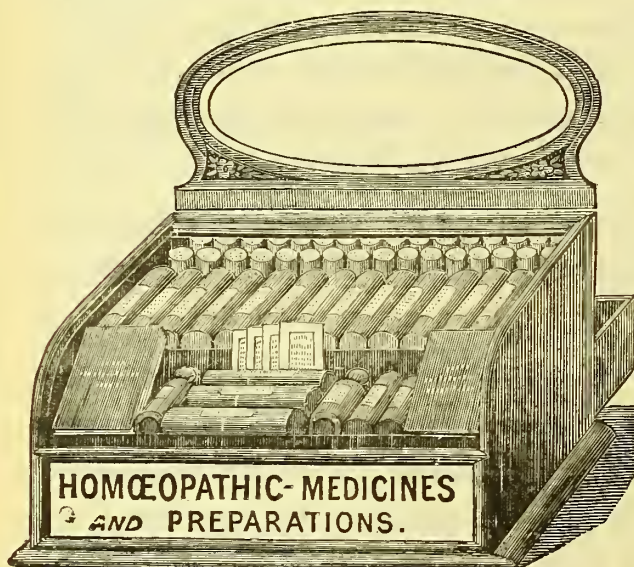
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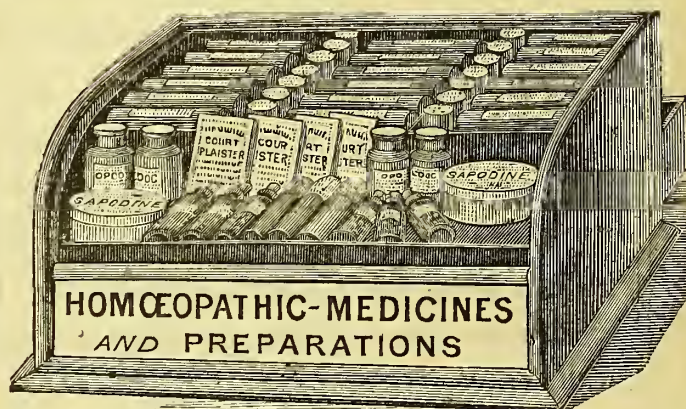
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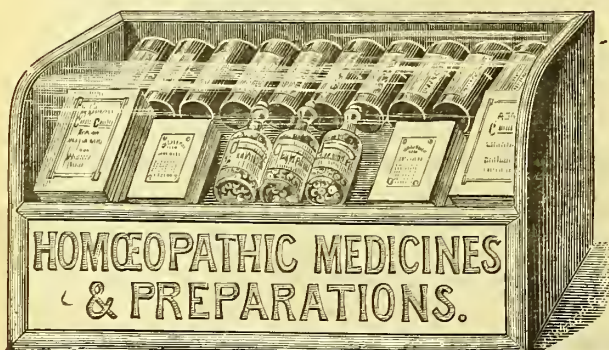
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326B "WAISTCOAT PATTERN," chamois and flannel, per doz., No. 1, 23/; No. 2, 31/6; No. 3, 40/; No. 4, 49/6; No. 5, 61/; No. 6, 71/.

326C "WAISTCOAT PATTERN," felt, scarlet and white, per doz., No. 1, 20/; No. 2, 28/6; No. 3, 36/; No. 4, 44/; No. 5, 54/6; No. 6, 67/.

326D "CUIRASS," chamois and flannel, per doz., No. 1, 26/6; No. 2, 33/; No. 3, 39/6; No. 4, 47/6; No. 5, 59/6; No. 6, 72/.

327 "CUIRASS," felt, reaching from neck to hips, front and back, and fastening with laces and eyelets, five sizes, per doz., No. 1, 24/; No. 2, 30/; No. 3, 36/; No. 4, 43/; No. 5, 54/; No. 6, 66/.

(Sizes of "Cuirass"—No. 1, 11½ × 9½ in.; No. 2, 13 × 11 in.; No. 3, 16 × 11½ in.; No. 4, 17 × 13 in.; No. 5, 18 × 14 in.; No. 6, 18 × 17½ in.)

327A CUIRASS JACKETS, with half sleeves, buttoning down front, made of perforated chamois leather and porous scarlet flannel, in four sizes, each, 32 × 18 in., 6/6; 34 × 18½ in., 7/6; 37 × 20½ in., 8/6; 39 × 21 in., 9/6.

(Larger or smaller sizes made to order.)

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Specially Recommended for Rheumatism.

SINGLE—	No. 1	2	3	4	5
Ladies'	per dozen 7/6	9/6	11/6	14/	20/
DOUBLE, Covering—					
Chest and back	16/6	22/	27/	33/	44/

Ordinary Quantity 10% Monthly Account.

By £2 Worth 15% " "

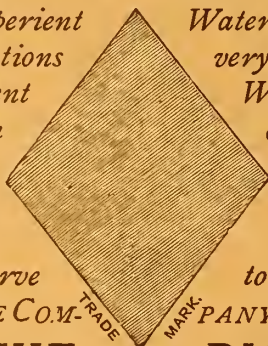
By £10 Worth 20% " "

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